

**EPA REGISTRATION NUMBER 88341-6**

# PROCESSING REQUEST

Reg # 88341-6

Decision # 507126

Description: New Product

Electronic Label & Letter  
(see PPLS):

OR

Non Electronic  
Label & Letter  
(Scanning required):

☐ Dated:  
12/09/2015

☐ Dated:

\*\*\*Only one label type should be selected\*\*\*

Other Materials Sent (see jacket):

☐ New CSF(s) Dated: 03/17/2015

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Wanda Henson

Division: AD

Phone: (703) 308-6345

Date: 03/31/2016



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Antimicrobials Division (7510P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

88341-6

Date of Issuance:

12/9/15

NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

PureCide® 7.5

Name and Address of Registrant (include ZIP Code):

Robert Sullivan  
T.A. Comb, LLC  
1241 N. Ellis  
Bensenville, IL 60106

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Demson Fuller, Product Manager 32  
Regulatory Management Branch II,  
Antimicrobials Division (7510P)

Date:

12/9/15

2. You are required to comply with the data requirements described in the DCI identified below:

a. Sodium Chlorite GDCI-020502-29789

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Reevaluation Team Leader (Team 36): <http://www2.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobial-division>

3. The data requirements for storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) are not satisfied. A one year study is required to satisfy these data requirements. You have 18 months from the date of registration to provide these data.

4. Make the following label changes before you release the product for shipment:

- Revise the EPA Registration Number to read, "EPA Reg. No. 88341-6."

5. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 03/17/2015
- Alternate CSF 1 dated 03/17/2015

If you have any questions, please contact Wanda Henson by phone at (703) 308-6345 or via email at [henson.wanda@epa.gov](mailto:henson.wanda@epa.gov)

Sincerely,



Denson Fuller, Product Manager 32  
Regulatory Management Branch II  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

Enclosure

# PureCide® 7.5

**ACCEPTED****12/09/2015**

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act as amended for the  
pesticide registered under  
EPA Reg. No. 88341-6

**ACTIVE INGREDIENT:**

SODIUM CHLORITE.....7.50%  
INERT INGREDIENTS.....92.50%  
TOTAL.....100.0%

**KEEP OUT OF REACH OF CHILDREN****DANGER**

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"><li>▪ Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>▪ Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li><li>▪ Call a poison control center or doctor for treatment advice.</li></ul>
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"><li>▪ Take off contaminated clothing.</li><li>▪ Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>▪ Call a poison control center or doctor for treatment advice if burning or irritation of skin persists.</li></ul>
IF SWALLOWED	<ul style="list-style-type: none"><li>▪ Have person sip a glass of water if able to swallow.</li><li>▪ Call a poison control center or doctor immediately for treatment advice.</li><li>▪ Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>▪ Do not give to an unconscious person.</li></ul>
IF INHALED	<ul style="list-style-type: none"><li>▪ Move person to fresh air and monitor for respiratory distress.</li><li>▪ If cough or difficulty in breathing develops, consult a physician immediately.</li><li>▪ If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>▪ Call a poison control center or doctor for further treatment advice.</li></ul>
<b>For emergency information call: 800-424-9300 (24 hours)</b> Have the product container or label with you when calling a poison control center or doctor or going to treatment.	
<b>NOTE TO PHYSICIAN</b> Probable mucosal damage may contraindicate for the use of gastric lavage.	

TA COMB, LLC  
1241 N. Ellis  
Bensenville, IL 60106

EPA Reg. No. 88341-A  
EPA Est. No.

Lot# \_\_\_\_\_

Net Contents \_\_\_\_\_ Gallons

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS & DOMESTIC ANIMALS  
DANGER**

**Corrosive.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. May be harmful if inhaled. Do not get in eyes, on skin or on clothing. Wear protective eyewear (splash proof goggles). Wear protective clothing and rubber gloves when handling this product. Avoid breathing mists or fumes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing to avoid fire.

**ENVIRONMENTAL HAZARDS**

This product is potentially toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL AND CHEMICAL HAZARDS**

Dry sodium chlorite is a strong oxidizing agent. This product is incompatible with strong acids, oxidizing agents, and reducing agents. This product becomes a fire or explosive hazard if allowed to dry. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter. Do not use moist or damp utensils.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

## **DIRECTIONS FOR CONTROLLING THE GROWTH OF ALGAE IN RECIRCULATING COOLING WATER TOWERS**

1. Clean badly fouled systems before starting treatment.
2. When algae are visible, add an initial dosage of 22 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system. Repeat if necessary until control is evident.
3. Where algae control is evident, use a subsequent dose of 11 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system twice a week or as needed to maintain control.
4. Add PureCide® 7.5 directly to the cooling tower drip pan (cold water basin) near the inlet to the recirculating pump.

## **Directions for Use in the Chemical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Microorganism or Mollusk Control, and as a Chemical Oxidant in Aquatic Systems**

**User is responsible for compliance with applicable Federal, state and local laws regarding proper use and disposal of the chlorine dioxide generated.**

**Feed requirements:** Feed rates of PureCide® 7.5 will depend on the severity of contamination and the degree of control desired. The exact dosage will depend on the size of the system and residual necessary for effective control. Depending on the generator type, PureCide® 7.5 may be diluted with water at the point of use to prepare a lower % active aqueous solution for use in chlorine dioxide generators.

Some examples of industrial applications of chlorine dioxide include:

- Potable water disinfection and removal of sulfide
- Control of bacterial slime and algae and mollusks in industrial recirculating and one-pass cooling systems
- Biocontrol in food processing flumes, water-using equipment, cooling water, and recycled waters.
- Disinfection of sewage and plant wastes.
- Destruction of phenolics, simple cyanides and sulfides by chemical oxidation.
- Bacterial slime control in white water paper mill systems.
- Bacterial control in oil well and petroleum systems.

**Method of feed:** Large amounts of chlorine dioxide (ClO<sub>2</sub>) can be generated by several common methods, including:

1. The chlorine method which utilizes a sodium chlorite solution and chlorine gas, or
2. The hypochlorite method which utilizes a sodium chlorite solution, a hypochlorite solution, and an acid, or
3. The Acid-chlorite method, which utilizes a sodium chlorite solution and an acid, or
4. The electrolytic method, which utilizes a sodium chlorite solution, with sodium chlorite added, as needed.

Your T.A. Comb representative can guide you in the selection, installation and operation

for feed systems.

### **Potable Water Treatment**

The selected generator should be equipped with a sensor that detects the concentration of  $\text{ClO}_2$  that is produced. In addition, the generator should be periodically calibrated according to the manufacturer's instructions and/or by using standard chlorine dioxide, quantitated by iodometric titration. Read the instructions on the chlorine dioxide generation system before using this product.

$\text{ClO}_2$  is used as both an oxidant and a disinfectant in drinking water treatment. For most municipal and public potable water systems, a chlorine dioxide residual concentration of 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

### **Industrial Cooling Water Treatment**

For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required dosages will vary depending on the exact application and the degree of contamination present. The required  $\text{ClO}_2$  residual concentrations range between 0.1 and 5.0 ppm. Chlorine dioxide may be applied either continuously or intermittently. The typical chlorine dioxide residual concentration range is 0.1 - 1.0 ppm for continuous doses, and 0.1 - 5.0 ppm for intermittent doses. The minimum acceptable residual concentration of  $\text{ClO}_2$  is 0.1 ppm for a minimum one minute contact time.

### **Mollusk Control in Water Systems**

$\text{ClO}_2$  generated from sodium chlorite may be used for mollusk control in commercial and industrial recirculating and one-pass cooling water systems. The required dosages will vary with the system type, system conditions, the degree of water contamination present and the desired level of control. Depending on the extent of the infestation, sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve the necessary  $\text{ClO}_2$  residual concentration.

Veliger Control: Maintain a continuous chlorine dioxide residual of 0.1 - 0.5 ppm.

Intermittent Dose: Apply  $\text{ClO}_2$  to obtain a chlorine dioxide residual concentration of 0.2 - 25 ppm. Repeat as necessary to maintain control.

Continuous Dose: Maintain a  $\text{ClO}_2$  residual concentration of up to 2 ppm.

### **Food Plant Process Water Treatment**

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems, and hydro coolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system,  $\text{ClO}_2$  should be applied continuously or intermittently to achieve a  $\text{ClO}_2$  residual concentration between 0.25 and 5.0 ppm.

Water containing up to 3 ppm residual  $\text{ClO}_2$  may be used to:

- (1) Provide microbial control in wash or process water for fruit and vegetable raw agricultural commodities.
- (2) Control spoilage and decay causing non-public health microorganisms present in the wash or process water for fruit and vegetable raw agricultural commodities.
- (3) Provide microbial control in poultry chiller water.

#### **Wastewater Treatment**

$\text{ClO}_2$  is effective as both a disinfectant and an oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a chlorine dioxide residual concentration of up to 5 ppm is sufficient to provide adequate disinfection.

For sulfide odor control, between pH 5-9, a minimum of 5.0 ppm (wt) of  $\text{ClO}_2$  should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8, 1.5 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol; at pH greater than 10, 3.3 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol.

#### **Bacterial Slime Control in Paper Mills**

$\text{ClO}_2$  generated from sodium chlorite is effective for use in controlling microbiological growth in white water paper mill systems. The required dosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, sodium chlorite should be applied continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.

#### **Directions for Use in Controlling Microbial Population in Poultry Processing Water**

$\text{ClO}_2$  generated from this product may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does not exceed 3 ppm, as determined by an appropriate method in accordance with 21CFR§173.300.

For treatment of poultry chill water, apply this product as necessary through a  $\text{ClO}_2$  generation system to maintain a residual concentration of up to 3 ppm.

#### **Bacterial Control in Oil Wells and Petroleum Systems**

$\text{ClO}_2$  is effective in the remediation of bacterial and sulfide contamination commonly found in oilfield production, injection and disposal fluids. The required dosages will vary with process conditions.  $\text{ClO}_2$  may be applied either continuously or intermittently to oil well production water as it is separated from the oil, and before it is re-injected into the

well.

For continuous feeds,  $\text{ClO}_2$  may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, chlorine dioxide should be applied at a shock dosage of 200-3000 ppm.

**FOR USE ONLY WITH PURELINE® TREATMENT SYSTEMS FOR GENERATING CHLORINE DIOXIDE GAS TO APPLY AS A FUMIGANT to inhibit odor causing bacteria and odor causing microorganisms, and TO CONTROL MOLD AND MILDEW ON HARD, NON-POROUS AND POROUS SURFACES IN/ON BUILDINGS AND THEIR CONTENTS**

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Handlers/applicators must wear:

- Long sleeve shirt and long pants
- Shoes plus socks
- Full face protective respirator using cartridges for chlorine dioxide gas, when concentrations are at or below 5.0 ppm. Use NIOSH/MSHA approval TC-13F-314 Low Pressure Self Contained SCBA Respirator for gas concentrations above 5.0 ppm.
- Waterproof gloves

### **OVERALL APPROACH TO FUMIGATION AND REMEDIATION**

The objective of  $\text{ClO}_2$  fumigation is to effectively treat mold and mildew contamination, and odor causing bacteria and microorganisms present within buildings under operating conditions that protect site workers, the surrounding community and the environment.

Each fumigated building or subpart thereof is properly tented or sealed. During fumigation, operational parameters are monitored at an appropriate number of co-located  $\text{ClO}_2$  gas sampling points. At the end of fumigation, the addition of  $\text{ClO}_2$  gas is terminated and natural decay of the gas within the building begins. The building is aired out for the final stage. Building decay or  $\text{ClO}_2$  removal continues until such time that  $\text{ClO}_2$  concentration levels at all monitoring points have fallen below the Occupational Safety and Health Administration (OSHA) eight-hour time-weighted average (TWA) permissible exposure level (PEL) of 0.1 ppm, at which time the building is re-entered by fumigation personnel.

The user of this product shall develop a site-specific Safety Plan of Action (SPA) that follows these label instructions and takes into account site-specific information such as the size of the structure, its contents, condition, etc.

## **SPECIFIC USE INSTRUCTIONS**

### **Site Preparation**

To the extent feasible, remove debris, non-reusable items and water-soaked materials. Eliminate any sources of water (e.g. roof leaks, damaged plumbing, etc.) that may contribute to further water damage and/or mold and/or bacteria growth. Open any enclosed spaces to allow maximum exposure to the ClO<sub>2</sub> gas during fumigation.

### **Building Containment**

Tent the building undergoing fumigation completely with a material proven to be impervious to ClO<sub>2</sub> gas, or effectively seal the building through utilization of sealing materials such as tape, caulking, etc. in all external cracks, crevices, etc. through which ClO<sub>2</sub> might otherwise escape during fumigation.

### **Negative Air Pressure**

Contain ClO<sub>2</sub> gas in the building through use of a negative air pressure system to maintain a slight negative pressure on the internal walls and ceiling of the building at all times.

Pause the fumigation process immediately should ClO<sub>2</sub> breakthrough be observed at any time outside the contained area until the cause of breakthrough is ascertained and corrective measures are implemented as necessary.

### **Chlorine Dioxide Generation**

Generate ClO<sub>2</sub> in a ClO<sub>2</sub> generation system that produces ClO<sub>2</sub> gas through the use of an electrolytic generation system. The system reacts, PureCide® 7.5 sodium chlorite solution in electrolytic cells producing ClO<sub>2</sub>. Follow the label directions of that product. The ClO<sub>2</sub> gas generated will be pumped from the machine to the building.

### **Chlorine Dioxide Removal**

At the conclusion of fumigation, allow residual ClO<sub>2</sub> gas remaining in the building to decay naturally, or if quicker removal of ClO<sub>2</sub> is desired, allow fresh air to enter building.

### **Chemical Storage**

Store chemicals in drums, (5, 30 or 55 gal) depending on the size of the building being fumigated. Store all precursor and neutralization chemicals within secondary containment areas.

### **Process Wastewater**

Store wastewater generated by the fumigation process temporarily in a dedicated on-site storage tank. Collect and analyze representative samples of the wastewater for purposes of waste profiling. If the wastewater is determined to be non-hazardous, dispose of into the sanitary sewer system if allowed by the local publicly owned treatment works. Otherwise, send off site to a permitted non-hazardous wastewater treatment facility.

### **Ancillary Equipment**

Provide standby electrical generation power to provide power to critical fumigation systems should utility power to a fumigation site be interrupted at any time.

### **Equipment Testing**

Test all key fumigation system components as they are installed to ensure that all subsystems will operate as designed.

Before commencing the fumigation, conduct a low-level "pulse" test in which all subsystems are simultaneously challenged as if it were the actual fumigation, with the exception that significantly lower ClO<sub>2</sub> concentration levels are used (i.e., 200 to 500 ppm) than those used during the actual fumigation process and ClO<sub>2</sub> is introduced into the building for a much shorter duration (i.e., 15-30 minutes). Design and conduct the test such that all elements that support the fumigation are proven functional, operational and effective.

### **Fumigation Operation Sequencing**

Perform fumigation activities in the following operational sequence to ensure safety and efficacy of the process.

Task Number	Task Description
1	Verify spill containment supplies are in place
2	Verify necessary chemical inventory is in place
3	Verify acceptable meteorological conditions exist
4	Conduct pre-fumigation safety meeting
5	Verify Emergency Response Team is in place
6	Verify Operations Team is in place
7	Confirm all personnel are out of building
8	Initial ClO <sub>2</sub> generation
9	Initiate ClO <sub>2</sub> concentration "ramp-up"
10	Initiate internal and external ClO <sub>2</sub> gas sampling
11	Achieve minimum desired ClO <sub>2</sub> concentration to start CT clock
12	Maintain ClO <sub>2</sub> concentration above target level
13	Terminate ClO <sub>2</sub> generation
14	Terminate gas sampling when ClO <sub>2</sub> <0.1 ppm
15	Conduct building inspection entry

### **Temperature Monitoring**

Monitor temperature at an appropriate number of co-located building locations through use of HOBO® U12-011 TEMP/RH Data Loggers. The instrument has a measuring range of -4 to 158°F with an accuracy of ±0.63°F. Take measurement of 5-minute intervals during the conditioning, fumigation and aeration phases of the process. Obtain a local readout of temperature readings by connecting the data loggers to a PC via USB cable from the various monitoring locations. Log data in the monitor during fumigation and download for manipulation following fumigation.

### **Chlorine Dioxide Monitoring**

Monitor ClO<sub>2</sub> concentration levels by means of a composite sample collection system constructed of ¼-in inside diameter high-density polyethylene (HDPE) tubing. HDPE tubing has been shown to be non-reactive with ClO<sub>2</sub>. Run the tubing from an appropriate number of co-located monitoring locations inside the building to a central sampling manifold located outside the building. Have knowledgeable air-sampling technicians collect samples and deliver them to an on-site gas laboratory for analysis.

### **USE PRECAUTIONS**

Conduct fumigation operations in a manner that protects both workers and members of the general public from exposure to fumigation process chemicals through implementation of specifically designed safety measures.

### **Worker Safety**

#### **Site-Specific Health and Safety Plan**

Develop a Site-Specific Health and Safety Plan (HASP) to establish safe working and operating conditions for both fumigation preparation activities and fumigation operations. Prepare the HASP in accordance with applicable OSHA guidelines and regulations.

#### **Health and Safety Training**

Establish minimum health and safety training requirements for all personnel involved in fumigation operations. Do not allow workers to participate in, or supervise field activities until they have been trained to a level required by their job function and responsibility. Cover appropriate elements during initial training including: (1) names of personnel and alternates responsible for site safety and health; (2) safety, health and other hazards present on site; (3) proper use, care and maintenance of PPE; (4) work practices by which the worker can minimize risks from hazards; (5) safe use of engineering controls and equipment on site; (6) medical surveillance requirements, including recognition of symptoms and signs which might indicate over exposure to hazards; and (7) contents of the site HASP.

In addition to initial training, provide Hazard Communication (HAZCOM) and Respiratory Protection training. In HAZCOM training, provide information on the possible types of biological or chemical agent contamination present within a facility, as well as the chemical substances stored and generated on-site, including physical properties, fire and explosion data, reactivity data, health hazard data, emergency and first aid procedures, spill and leak procedures, etc. In Respiratory Protection training, provide information about the proper selection, fitting, use, care and maintenance of respirators, with an emphasis on specific respirators worn if responding to an emergency involving either a chemical release or a fire. Provide basic First Aid and CPR training to all personnel who might be involved in a response to a medical emergency on-site.

Provide an orientation briefing to individuals who are on-site for short periods of time performing limited tasks as either visitors or contractors, including an overview of the site-specific HASP and a discussion of the facility layout. Also make these individuals aware of evacuation notification procedures and alert them to the pre-determined emergency response Rally Points or places of safe refuge where they should report in the event of an emergency.

#### **Post-Fumigation Building Re-Entry Requirements**

Establish a post-fumigation building re-entry requirements that prohibits workers from re-entering the building in OSHA Level D protective equipment until such time that it has been demonstrated that the concentration of  $\text{ClO}_2$  at all monitoring points has fallen to a level below the applicable OSHA TWA PEL standard at 0.1 ppm.

### **Public Safety**

#### **Site Emergency Planning**

Conduct meetings on-site periodically to discuss project roles and responsibilities, site communication procedures, hazardous materials storage issues and potential hazards. The goal of these meetings should be to gain consensus with regard to roles and responsibilities during potential emergency events.

#### **Site Security**

Establish site security measures to prevent unauthorized entry to the site and secure the site perimeter during on-going fumigation preparation activities. Include site entry control procedures, personnel responsibilities, facility lighting requirements and emergency communication procedures.

#### **Specialized Training**

Provide specialized training to prepare site personnel to respond to a variety of potential emergency event scenarios that might occur during fumigation preparation activities or during the fumigation itself including a fire inside or outside the building, chemical spill and/or a release of a significant amount of the fumigant to the atmosphere during fumigation.

#### **Emergency Response Supplies and PPE**

Stage appropriate spill response supplies suitable for cleanup of hazardous materials being stored on-site in close proximity to the stored materials. Also stage a variety of PPE, including Self-Contained Breathing Apparatus, at appropriate locations for use in an emergency response to a potential hazardous material release.

#### **Site Communications**

Assign two-way radios to key personnel at the site. Two-way radios facilitate effective communication among all parties at the worksite and allow for careful monitoring of work tasks by individuals responsible for initiating and performing emergency response activities. Use separate channels for work being performed inside and outside the

building so that individuals monitoring the work can effectively monitor tasks being performed in both locations simultaneously.

#### **Surface and Ground Water Protection**

Protect surface and ground water supplies by containing any chemical release that might occur within a secondary containment area and respond with absorbents and neutralizing agents stored on-site. Place impervious spill mats in close proximity to storm drains in the vicinity of chemical storage areas where necessary. Deploy these mats immediately to cover drainage catch basins in the event of a chemical release from a primary storage vessel.

#### **Site Evacuation Contingency Plan**

Develop specific procedures to respond to a potential emergency response scenarios that might occur during fumigation preparation operations or the fumigation itself. Identify a Site Safety and Health Officer (SSHO) who is responsible for determining when on-site personnel should "Shelter-In-Place" or evacuate the site should an emergency evacuation of the site be contemplated.

#### **Fire Response**

Place fire extinguishers throughout the site, both inside and outside the building, for use in fighting an incipient-stage fire. Also, activate existing operational building fire suppression systems in the event of a fire inside the building.

In the event that a fire is detected either inside or outside the building, implement a series of predetermined response measures including the following:

- The individual who identifies the fire immediately alerts their Supervisor, the SSHO and the Emergency Response Coordinator (ERC) for the site.
- If the individual who identified the existence of the fire can immediately extinguish it with a local fire extinguisher without endangering themselves or others, they extinguish the fire while the ERC is assembling the on-site Emergency Response Team (ERT).
- The on-site ERT dons proper PPE and initiates emergency response activities. The ERT is provided with PPE as warranted by the nature of the fire.
- Potentially affected electrical systems are deactivated as soon as possible, if appropriate, to prevent a spread of the fire.
- After donning appropriate PPE, the source and nature of the fire are investigated. If the fire is determined to be in its incipient stage, the ERT attempts to distinguish the fire. If a fire either inside or outside the building is determined to be beyond the incipient stage, the SSHO or ERC immediately requests the assistance of external emergency fire response authorities.

- The SSHO notifies all site workers to cease their activities, shutdown all process equipment and report to a designated location so that a "headcount" may be taken to account for all personnel.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- If the fire emergency also involves a release of hazardous materials, the release is addressed in accordance with the response measures outlined in the Plan.
- If necessary, based on the size and scope of the fire, the SSHO notifies appropriate external authorities and provides them with appropriate information about the fire.

### **Chemical Spill Response**

Locate all storage vessels within secondary containment areas. Store incompatible materials within separate secondary containments. Place impervious spill mats near all storm water catch basins in the vicinity of chemical storage areas where necessary to prevent inadvertent discharge of chemicals through the storm drain sewer system in the event of a leak or other accidental release.

In the event that a hazardous material leak from a storage vessel or associated piping is detected, implement a series of predetermined response measures including the following:

- The individual who identified the release immediately alerts their Supervisor, the SSHO and the ERC for the site.
- The ERC assembles the on-site ERT, who don proper PPE and initial response activities. The ERT is provided with PPE as warranted by the nature of the hazardous material release.
- After donning appropriate PPE, the source and nature of the release are investigated and the release is stopped at its source (if safe to do so). Spill mats are placed over storm drain catch basins to prevent discharge of spilled material to the storm water drainage system and/or to ground water where necessary. Any sources of ignition present in the area are also eliminated.
- If any personnel have been affected by the release, they are evacuated from the area of impact as soon as possible and first aid administered as appropriate. If necessary, external medical emergency response authorities are summoned.
- Only members of the ERT involved in overseeing or performing emergency operations are allowed within the designated hazard area. If possible, the area is roped or otherwise blocked off. If a release cannot be immediately contained

within a containment area, an isolation area is established around the spill, using sorbent and neutralizing materials.

- In the event a release breaches onsite secondary containment, the leading edge around the spill is contained with neutralizing agents and/or absorbents or other appropriate materials. Pumps may be employed to transfer spilled liquids to on-site waste tanks and for the removal of any liquid that may congregate at low points or depressions on surfaces.
- If the total amount of hazardous material released is less than the equivalent volume of 300 gallons, spill response materials and equipment located on-site are utilized to contain and collect the waste.
- Collected waste material is stored in secure storage containers for future disposal.
- If the amount of hazardous material released is greater than that which can be contained and collected for disposal by the on-site ERT, arrangements are made with an external contractor to respond to the site with adequate supplies and equipment to perform necessary clean-up operations.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- The SSHO notifies external emergency response authorities if deemed necessary by the size and scope of the release. External emergency response authorities will take appropriate actions if required to safeguard the surrounding community.
- Following the initial spill response, provisions are made to conduct a full environmental assessment to delineate impacted areas. Hazardous materials generated from a release are disposed of off-site in accordance with applicable laws and regulations.

#### **Building ClO<sub>2</sub> Leak Detection and Repair**

Perform ambient air monitoring during both the low-level "pulse" test and the actual fumigation to identify leaks of ClO<sub>2</sub> gas from the building so that appropriate action may be taken in the event a leak is detected. Whenever possible, repair building leaks immediately using appropriate patching materials.

Dispatch teams of trained employees to the immediate perimeters of the building, and to the rooftop where appropriate, as soon as ClO<sub>2</sub> liquid begins flowing from the generator to the emitters. Initially assign at least two teams to building monitoring duties. Each team should consist of at least two individuals, each having had sufficient previous experience with ClO<sub>2</sub> to readily identify its characteristic odor in air.

Equip each monitoring team with a calibrated Industrial Scientific Gas Monitor with a ClO<sub>2</sub> sensor capable of detecting ClO<sub>2</sub> gas and reporting TWA readings for purpose of comparison with OSHA's eight-hour TWA PEL and the American Conference of Governmental Industrial Hygienists (ACGIH) recommended 15-minute TWA Short Term Exposure Limit (STEL) of 0.3 ppm and the OSHA PEL is 0.1 ppm. Because the human olfactory response to ClO<sub>2</sub> has been shown through experience to be far more sensitive than any commercially-available hand-held monitoring technology, the primary objective of using the monitor is not to identify the presence of ClO<sub>2</sub> emissions, but rather to make sure that team members are not being exposed to concentrations of the gas that are in excess of prescribed standards and recommended threshold levels while they are performing their ambient monitoring and repair assignments. In the event that ClO<sub>2</sub> readings above the 0.1 ppm eight-hour OSHA standard or the 0.3 ppm 15-minute ACGIH STEL are registered by a monitor during fumigation, the team identifying the reading should leave the area where the elevated reading was identified and don appropriate respiratory protection before continuing work in the area. A full-face negative pressure respirator with combination P-100 filter/acid gas cartridges should be used for ClO<sub>2</sub> concentrations above an applicable exposure standard but less than 5 ppm. A self-contained breathing apparatus and appropriate skin protection must be used in any atmosphere containing more than 5 ppm ClO<sub>2</sub>.

Identify potential sources of ClO<sub>2</sub> emissions from the top and sides of the building and immediately perform any repairs and/or modifications necessary to eliminate or reduce emissions to the greatest degree possible. Also, communicate monitoring findings to the Project Manager so that operational changes and/or shutdown of fumigation operations can be initiated immediately in the event that a leak cannot be effectively patched in a reasonable period of time. When a building leak cannot be quickly and effectively repaired, adjust operational parameters as necessary to mitigate the leak or terminate the fumigation process to eliminate exposure risk to the surrounding community.

#### **Adjustment of Operational Parameters**

In the event a ClO<sub>2</sub> leak cannot be promptly repaired through use of available patching materials, adjust fumigation operating parameters, either temporarily or for the remaining duration of the fumigation, to prevent additional gas from escaping the building into the surrounding environment.

Increase the NAU fan speed upwards to increase the negative pressure level on the internal walls and ceiling of the building and/or decrease the target ClO<sub>2</sub> concentration level being applied to the building to lower the concentration of ClO<sub>2</sub> in air escaping through the leak.

#### **Termination of Fumigation Process**

Should it be determined that a significant ClO<sub>2</sub> leak cannot be effectively repaired, nor can the magnitude of the leak be substantially mitigated through adjustment of operational parameters, terminate the fumigation process and take necessary measures to remove residual gas from the building.

**Post Fumigation Repair and Cleaning**

Remove any remaining debris, non-reusable items and water soaked materials. Replace, repair or clean damaged areas of structure as needed. For additional information and guidance on mold remediation, see EPA's website at [www.epa.gov/mold](http://www.epa.gov/mold).

[All FDA regulated uses below are optional text]

[PureCide 7.5® can be used under US Food and Drug Administration (FDA) regulations 21CFR§173.300 for poultry processing water and as an antimicrobial agent in water used to wash fruits and vegetables that are not raw agricultural commodities.]

**STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Do not contaminate water, food or feed by storage or disposal. Keep product in tightly closed container when not in use. Don't drop, roll or skid drum. Keep upright. Always replace cover. Store in a cool, dry, well-ventilated area away from heat or open flame.

**EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and well-ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large quantities of water. Any unopened drums near the fire should be cooled by spraying with water.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:**

**For non-refillable solid containers smaller than 50 lbs.**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning.

**For non-refillable solid containers that are larger than 50lbs.**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning if appropriate. Triple Rinse container promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or mix tank or store rinsate for later use or disposal. Repeat the procedure two more times.

For refillable containers, all sizes.

Refillable container. Refill this container with PureCide® 7.5 only. Do not reuse this container for any other purpose. Cleaning or pressure rinsing the container is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

**WARRANTY**

**TA Comb, LLC** warrants that this product complies with the specifications expressed on the label. To the extent consistent with applicable law, **TA Comb, LLC** makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose.

LB

UNITED STATES ENVIRONMENTAL PROTECTION  
AGENCY  
WASHINGTON, D.C. 20460



United States  
Environmental Protection  
Agency

Office of Pesticide Programs

**Antimicrobials Division (AD)**

Tuesday, November 17, 2015

MEMORANDUM

Subject: Acute Toxicity Review for EPA Reg. No.: 88341-A  
DP Barcode: D428620  
Product Name: PureCide 7.5

From: Ian Blackwell, Biologist  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

Through: Karen Hicks, Team Leader  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

To: Demson Fuller, PM 32/ Wanda Henson  
Regulatory Management Branch  
Antimicrobials Division (7510P)

Applicant: T.A. Comb, LLC

FORMULATION FROM LABEL:

<u>PC Code</u>	<u>Active Ingredient:</u>	<u>% by wt.</u>
020502	Sodium chlorite	7.5
	<u>Other Ingredient(s):</u>	<u>92.5</u>
	Total:	100.0

- I BACKGROUND: Sherri Gray consulting (authorized representative for T.A. Comb, LLC) has cited a set of acute toxicity studies to support the data requirements of EPA File Symbol 88341-A. While 88341-A contains 7.5% sodium chlorite, some of the products tested in the cited studies contain different percentages of that same active ingredient.

Study	MRID Number	Toxicity Category	% sodium chlorite
Acute Oral Toxicity	155965	II	25
Acute Dermal Toxicity	155964	III	25
Acute Inhalation Toxicity	42484101	II	80.6
Primary Eye Irritation	155963	I	25
Primary Skin Irritation	155962	II	25
Dermal Sensitization	44721708	Nonsensitizer	20

The OPP Similarity Clinic assessed this submission.

II RECOMMENDATIONS:

1. The OPP Similarity Clinic has decided to bridge the following studies:
  - A. Acute oral toxicity
  - B. Acute dermal toxicity
  - C. Primary skin irritation
  - D. Dermal sensitization
2. The Similarity Clinic has agreed to bridge acute toxicity data from the 80% product to support 88341-A. As part of this bridging, 88341-A must be assigned toxicity category II. Should the registrant feel that this classification is not representative of this product, they may have an acute inhalation toxicity study conducted to demonstrate the toxicity of this product.
3. CTT waives the primary eye irritation study based upon the pH (12.1) of this product. We classify this study based upon the pH of 88341-A, not the citation of data from another product. Should the registrant feel that this classification is not representative of this product, they may have a primary eye irritation study conducted to demonstrate the toxicity of this product.

The acute toxicity profile for File Symbol 88341-A is currently:

Study	MRID Number	Toxicity Category	Study Status
Acute Oral Toxicity	155965	III	Bridged
Acute Dermal Toxicity	155964	III	Bridged
Acute Inhalation Toxicity	42484101	II	Bridged
Primary Eye Irritation	155963	I	Waived
Primary Skin Irritation	155962	II	Bridged
Dermal Sensitization	44721708	Nonsensitizer	Bridged

III LABELING: Label Review System

PRODUCT ID #: 088341-00006

PRODUCT NAME: PureCide 7.5

PRECAUTIONARY STATEMENTS

SIGNAL WORD: DANGER

Hazards to Humans and Domestic Animals:

Restricted Use Pesticide due to toxicity categories. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Child Resistant Packaging Required.

Corrosive. Causes irreversible eye damage. May be fatal if inhaled. May be fatal if swallowed. Causes skin irritation. Harmful if absorbed through skin. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Do not breathe spray mist. Do not get on skin or on clothing. Wear long-sleeved shirt and long pants, socks, chemical-resistant footwear, and gloves. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and gloves.

## First Aid:

### If in eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

### If inhaled:

- Move the person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

### If swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything to an unconscious person.

### If on skin:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: Note to PM/CRM/Registrant: The proposed label should contain a Note to Physician which addresses the category I Primary Eye Irritant toxicity. The following statements are suggested types of information that may be included, if applicable:

- technical information on symptomatology;
- use of supportive treatments to maintain life functions;
- medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide specialized medical advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

Label Created by: Ian Blackwell on 11/17/2015 Last Updated by: Ian Blackwell on 11/17/2015

This product meets the Agency requirements for Restricted-Use Classification based on data that place it in toxicity category I for primary eye irritation. In lieu of assigning the product Restricted-Use classification, the product manager may consider alternatives such as face shield or goggles (to mitigate the identified hazards). Restricted-Use requirements vary depending upon use sites, e.g., institutional use, residential use, etc. Please refer to the 40 CFR §152.170 for information on Restricted-Use products.

Based upon data placing it in toxicity category I for primary eye irritation, this product meets the Agency requirements for Child-Resistant Packaging (CRP). However, the Agency does not require products that are assigned Restricted-Use status to be placed in CRP in addition to Restricted-Use Classification. CRP requirements vary depending upon use sites, e.g., institutional use, residential use, etc. Please refer to the 40 CFR, §157.22 and 157.24 for CRP requirements and exemptions. Thus, CTT recommends that the Product Manager assign this product Restricted-Use classification; if not, the registrant should place this product in CRP.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



United States  
Environmental Protection  
Agency

Office of Pesticide Programs

Antimicrobials Division (AD)

November 6, 2015

DP BARCODE: 428617  
MRID: 49674600, 49674601, and 49674602  
SUBJECT: PureCide® 7.5  
REG. NO.: 88341-A  
DOCUMENT TYPE: Product Chemistry Review  
Manufacturing-use [ ] OR End-use Product [X]

INGREDIENTS:

<u>PC Code(s)</u>	<u>CAS Number</u>	<u>Active Ingredient(s)</u>
020502	7758-19-2	Sodium Chlorite

TEST LAB: T. A. Comb, LLC  
SUBMITTER: Sherri Gray Environmental Consulting Inc.  
GUIDELINE: Group A and B Product Chemistry  
ORGANIZATION: AD\PSB\CTT  
REVIEWER: Lynette T. Umez-Eronini  
APPROVED BY: Karen P. Hicks  
APPROVED DATE: November 6, 2015  
COMMENT: The product is for use on food contact surfaces.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



Environmental Protection Agency

Office of Pesticide Programs

Antimicrobials Division (AD)

November 6, 2015

MEMORANDUM

SUBJECT: Product Chemistry Review for EPA Reg. 88341-A  
Product Name: PureCide® 7.5  
DP Barcode: 428617

FROM: Lynette T. Umez-Eronini, Chemist *Lynette T. Umez-Eronini*  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

THRU: Karen Hicks, Team Leader *Karen Hicks*  
Chemistry and Toxicology Team  
Product Science Branch  
Antimicrobials Division (7510P)

TO: Demson Filler PM #32/Srinivas Gowda  
Regulatory Management Branch II  
Antimicrobials Division (7510P)

Applicant: T. A. Comb, LLC

CODE A531 New Product; Identical or Substantially Similar in Composition

DATE DUE: December 10, 2015

PRODUCT FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Sodium Chlorite	7.50
Inert Ingredient(s):	92.50
Total:	100.00

## BACKGROUND:

The consultant, Sherri Gray Environmental Consulting Inc. on behalf of the registrant, T. A. Comb, LLC, has submitted an application for registration of an integrated end-use product called PureCide® 7.5. The product is used in water systems for control of microbial growth in water systems, industrial cooling water treatment food plant process water treatment and wastewater treatment.

The product chemist reviewed the following documents:

1. Cover letter from the registrant to EPA, 6/30/2015.
2. Proposed Product Label, undated.
3. Basic Confidential Statement of Formula (CSF), 3/17/2015.
- 4.

49674600	Same as Cover Letter above. T.A. Comb, LLC (2015) Submission of Product Chemistry Data in Support of the Application for Registration of PureCide 7.5. Transmittal of 2 Studies.
49674601	T.A. Comb, LLC (2015) Submission of Product Chemistry Data in Support of the Application for Registration of PureCide 7.5. Transmittal of 2 Studies.
49674602	Gray, S. (2015) Group B Product Chemistry Summary for PureCide(R) 7.5. Project Number: TAC5/15/0002. Unpublished study prepared by T.A. Combs, LLC. 19p.

5. Summary of the Physical/Chemical Properties, 5/14/2015.

## FINDINGS:

1. The nominal concentration of the active ingredient on Basic CSF, 3/17/2015 is consistent with the product label.
2. All certified limits meet EPA Standard certified limits.
3. All ingredients in this formulation are approved for use in pesticide formulations.
4. Group A product chemistry data requirements applicable to end-use products have been met (see MRID 49674601 Table A below).
5. Group B product chemistry data requirements applicable to end-use products have been met (see MRID 49674602 and Table B below), with the exception of 830.6317 Storage Stability and 830.6320 Corrosion Characteristics.

## CONCLUSION:

Product Science Branch of Antimicrobials Division finds the Basic CSF, 3/17/2015 is acceptable. Group A Product Chemistry data requirements have been met. Group B

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Product Chemistry data requirements have been met, with the exception of 830.6317 Storage Stability and 830.6320 Corrosion Characteristics. The unmet requirements must be sent upon completion.

## PRODUCT CHEMISTRY REVIEW

### I. CONFIDENTIAL STATEMENT OF FORMULA

#### a. Type of formulation and source registration:

- Non-integrated formulation system Yes [X] No [ ]
- Are all TGAs used registered? Yes [ ] No [X]
- Integrated formulation system Yes [ ] No [X]
- If "ME-TOO," specify EPA Reg. No. of existing product:

#### b. Clearance of inerts for non-food or food use:

The product is cleared for food use under 40 CFR §180.940 and §180.950.

Yes [X] No [ ]

#### c. Physical state of product:

Liquid

#### d. The chemical IDs and analytical information (including that for the TGAs), density, pH, and flammability are consistent with that given in 830 Series, Group B.

Yes [ ] No [X]

#### e. The NCs and CLs are acceptable.

Yes [X] No [ ]

#### f. Active ingredient Sodium Chlorite

NC(%)  
7.5

LCL(%)  
7.1

UCL(%)  
7.9

#### g. For products produced by an integrated formulation system:

- Do all impurities of toxicological significance have a UCL?  
Yes [ ] No [ ] Not applicable [X]
- Have all impurities of  $\geq 0.1\%$  in the product been identified?  
Yes [ ] No [ ] Not applicable [X]

## II PRODUCT LABEL

a. The active ingredient statement (chemical IDs and NC) is consistent with the CONFIDENTIAL STATEMENT OF FORMULA. Yes ☒ No ☐

b. The formula contains one of the following:

- |  |                              |  |
|--|------------------------------|--|
| • 10% or more of a petroleum distillate: | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| • 1.0% or more of methyl alcohol:        | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| • sodium nitrite at any level:           | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| • a toxic List 1 inert at any level:     | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| • arsenic in any form:                   | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

c. If "yes" to any of the above, does the inert ingredients statement contain a footnote indicating this?

Yes ☐ No ☒ Not applicable ☒

d. Appropriate warning statement(s) regarding flammability or explosive characteristics of the product are listed on the label.

Yes ☐ No ☐ Not applicable ☒

e. The storage and disposal instructions for the pesticide container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses.

Yes ☒ No ☐

f. The product requires an expiration date at which time the NC falls below the LCL (based on the 1-year storage stability data or other information).

Yes ☐ No ☐

**Table A:**  
**Product Chemistry (Series 830, Group A)**

<b>Data Requirements</b>	<b>Acceptance of Information</b>	<b>MRID No.</b>
830.1550 Product Identity <sup>1</sup>	A	49674601
830.1600 Description of Materials	A	49674601
830.1620 Production Process <sup>2</sup>	NA	
830.1650 Formulation Process <sup>3</sup>	A	49674601
830.1670 Formation of Impurities <sup>4</sup>	NA	
830.1700 Preliminary Analysis <sup>5</sup>	NA	
830.1750 Certified Limits <sup>6</sup>	A	49674601
830.1800 Enforcement Analytical Method <sup>7</sup>	A	49674601
830.1900 Submittal of Samples	A A sample of the product will be available upon request.	49674601

Explanation: A=acceptable; N=not acceptable (i.e., item was submitted but is not acceptable); NA=technically not applicable (i.e., not required); G=data gap (i.e., item was not submitted but is required); U=requires upgrading (i.e., item is unacceptable but upgradeable); W=waived; E=EPA estimate.

<sup>1</sup>See Confidential Appendix A for additional information.

<sup>2</sup>For MP/EP products produced by an integrated formulation system.

<sup>3</sup>For products from a TGA or MP.

<sup>4</sup>May be waived unless actual/possible impurities are of toxicological concern.

<sup>5</sup>Five batch analysis required for products produced by an integrated formulation system.

<sup>6</sup>If different from standard CLs recommended in 40 CFR 158.175, this should be discussed in Confidential Appendix A.

<sup>7</sup>Abbreviate method used as follows: gas chromatography (GC), infrared (IR), ultraviolet absorption (UV), nuclear magnetic resonance (NMR), etc.

**Table B:**  
**Physical and Chemical Characteristics (Series 830, Group B)**

Physical/Chemical Properties*	Acceptance of Data	Value or Qualitative Description	MRID No.
830.6302 Color			
830.6303 Physical State	A	Liquid	49674602
830.6304 Odor	N/A		
830.6313 Stability to Normal and Elevated Temperatures, Metals, and Metal Ions	NA		
830.6314 Oxidation/Reduction; Chemical Incompatibility	A	Substantial reactivity with iron and iron salts.	49674602
830.6315 Flammability/Flame Extension	A	Product is not flammable.	49674602
830.6316 Explodability	A	Product does not explode.	49674602
830.6317 Storage Stability	G	Study underway.	49674602
830.6319 Miscibility <sup>1</sup>	A	Product is an aqueous, emulsifiable liquid.	49674602
830.6320 Corrosion Characteristics	G	Study underway.	49674602
830.6321 Dielectric Breakdown Voltage	A	Product is not intended to be used around electrical equipment.	49674602
830.7000 pH <sup>2</sup>	A	12.1, 1% (w/w) solution in DI water at 25°C.	49674602
830.7050 UV/Visible Absorption	NA		
830.7100 Viscosity	A	0.69 cS @40°C	49674602
830.7200 Melting Point/Melting Range	NA		
830.7220 Boiling Point/Boiling Range	NA		
830.7300 Density/Relative Density/Bulk Density	A	8.9 lbs/gal	49674602
830.7370 Dissociation Constants in Water	NA		
830.7550/830.7560/830.7570 Partition Coefficient	NA		
830.7840/830.7860 Water Solubility	NA		
830.7950 Vapor Pressure	NA		

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Explanation: A=acceptable; N=not acceptable (i.e., item was submitted but is not acceptable); NA=technically not applicable (i.e., not required); G=data gap (i.e., item was not submitted but is required); U=requires upgrading (i.e., item is unacceptable but upgradeable); W=waived; E=EPA estimate.

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\* Provide brief description, e.g., color – yellow or property value, e.g., density 1.25 g/cc. Unless otherwise indicated, the property should be at 25°C.

<sup>1</sup>If product is an emulsifiable liquid

<sup>2</sup>If product is dispersible with water



# PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 7-20-15

Experts In-Processing Signature: B.B.

Date 7-22-15

Fee Paid: Yes ☒

Division management contacted on issues No ☐ Yes ☐

Date \_\_\_\_\_

EPA Reg. Number: <u>88341-A</u>		EPA Receipt Date: <u>7-20-15</u>				
Items for Review				Yes	No	N/A*
1	Application Form (EPA Form 8570-1) signed & complete including package type			X		
2	Confidential Statement of Formula all boxes completed, form signed, and dated (EPA Form 8570-4)			X		
	a) All <u>inerts</u> , including fragrances, approved for the proposed uses (see Footnote A)	yes	no			
	<u>Active ingredients</u> [redacted]					
3	Certification with Respect to Citation of Data (EPA Form 8570-34) completed and signed (N/A if 100% repack)			X		
	Certificate and data matrix consistent			X		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes	no			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	Formulator's Exemption Statement (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)					X
	Data Matrix (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)			X		
5	a) Selective Method (Fee category experts use)	yes	no			
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	5 Copies of Label (Electronic labels on CD are encouraged and guidance is available)			X		
7	Is the data package consistent with PR Notice 86-5			X		
8	Notice of Filing included with petitions					X

\*Inert ingredient information may be entitled to confidential treatment\*

9	If applicable for conventional applications, <u>reduced risk rationale</u>			X
	<u>Required Data</u> and/or data waivers. See Footnote C.			
10	a) List study (or studies) not included with application			

Comments:

Documentation: Pass

• Required forms are complete.

Inerts:

• Active ingredient and [REDACTED] only, no inerts to review.

11-3: Pass

MRIQ. 446746

Status: Pass

TU 5/22/15

\* N/A – Not Applicable

#### Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the [inert Web site](#) and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient**. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at [inertsbranch@epa.gov](mailto:inertsbranch@epa.gov) and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the [Chief of Microbial Pesticides Branch](#).

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

#### **Unapproved Inerts Identified on CSFs**

##### **All applications except conventional new products and PIPs**

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or
3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;
4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

##### **Conventional New Product Applications**

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

#### PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.
3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

July 22, 2015

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

OPP Decision Number: D-507126  
EPA File Symbol or Registration Number: 88341-A  
Product Name: PURECIDE 7.5  
EPA Receipt Date: 20-Jul-2015  
EPA Company Number: 88341  
Company Name: T.A. COMB, LLC

SHERRI GRAY  
ENVIRONMENTAL CONSULTING LLC  
T.A. COMB, LLC  
15616 PLAIN DEALING PLACE  
MANASSAS, VA 20112

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: A531

NEW PRODUCT; IDENTICAL OR SUBSTANTIALLY SIMILAR IN COMPOSITION AND USE TO A REGISTERED PRODUCT; REGISTERED SOURCE OF ACTIVE INGREDIENT; SELECTIVE DATA CITATION ONLY FOR DATA ON PRODUCT CHEMISTRY / ACUTE TOXICITY / PUBLIC HEALTH PEST EFFICACY, WHERE APPLICANT DOES NOT OWN ALL REQUIRED DATA NOR HAS AUTHORIZATION LETTER FROM DATA OWNER;

No additional payment is due at this time. If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 308-6249.

Sincerely,

A handwritten signature in black ink, appearing to be "m/zh", is written over the word "Sincerely,".

Front End Processing Staff  
Information Technology & Resources Management Division

**Fee for Service**

{9714377~

This package includes the following

- ☒ New Registration
- ☐ Amendment

- ☒ Studies?      ☐ Fee Waiver?
- ☐ volpay    % Reduction: \_\_\_\_

for Division

- ☒ AD
- ☐ BPPD
- ☐ RD

Risk Mgr. 32

Receipt No.	S-	<span style="border: 1px solid black; padding: 2px;">971437</span>
EPA File Symbol/Reg. No.		<span style="border: 1px solid black; padding: 2px;">88341-A</span>
Pin-Punch Date:		<span style="border: 1px solid black; padding: 2px;">7/20/2015</span>

☐ This item is NOT subject to FFS action.

Action Code:

Requested: A531  
Granted: A531  
Amount Due: \$ 1737

Parent/Child Decisions:

☒ Inert Cleared for Intended Use

☐ Uncleared Inert in Product

Reviewer: Tom

Date: 7/21/15

Remarks:

S: 971437

Milestone Email:

Regulatory Type: Product Registration - Section 3



Application Type: New Registration



Company: 88341 T.A. COMB, LLC

Risk Manager: Antimicrobials Division, Risk Management Team 32



Product #: 88341-A

Product Name: PURECIDE 7.5

Me Too

Section3: 88341-2

Me Too Product

Name: PURECIDE 25

Application Date: 20-Jul-2015



OPP Rec'd Date: 20-Jul-2015



Front End Date: 20-Jul-2015



Risk Manager Send Date:



FFS Due Date:

Negotiated Due Date:

OPP Target Date:

Fast Track ☐

New Ingredient ☐

Receipt Description:

NEW REGISTRATION WITH STUDIES

New Ingredient

Request Date

New Ingredient

Received Date

Form A

Signature Date

Form B

Signature Date

Resubmission: ☐ Yes ☒ No

Fee For Service: ☐ Yes ☒ No

Billable: ☐ Yes ☒ No



Print Letter

Enter More Information

Tracking

Receipt Content

Study

CSF

View/Edit



## Receipt

### Your payment is complete

Pay.gov Tracking ID: 25M0SOV3  
 Agency Tracking ID: 74827333748  
 Form Name: Pesticide Registration Improvement Act - Prepayment  
 Application Name: PRIA Service Fees

### Payment Information



Payment Type: Debit or credit card  
 Payment Amount: \$1,737.00  
 Transaction Date: 06/25/2015 11:29:11 AM EDT  
 Payment Date: 06/25/2015  
 Registration Number:  
 Company Name: TA Comb, LLC  
 Company Number: 88341  
 Action Code: A531

### Account Information

Card Holder Name: Lucy Sutton  
 Billing Address: 1241 N. Ellis Street  
 Billing Address 2:  
 City: Bensenville  
 Country: United States  
 State/Province: IL  
 ZIP/Postal Code: 60106  
 Card Type: Visa  
 Card Number: \*\*\*\*\*9128

### Email Confirmation Receipt

Confirmation Receipts have been emailed to:  
 lucy.sutton@pureline.com

 <b>EPA</b> United States <b>Environmental Protection Agency</b> Washington, DC 20460		<input checked="" type="checkbox"/> <b>Registration</b> <input type="checkbox"/> <b>Amendment</b> <input type="checkbox"/> <b>Other</b>	OPP Identifier Number
<b>Application for Pesticide - Section I</b>			
1. Company/Product Number 88341-A		2. EPA Product Manager Demson Fuller	
4. Company/Product (Name) T.A. Comb, LLC / PureCide® 7.5		3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted	
5. Name and Address of Applicant (Include ZIP Code)  T.A. Comb, LLC 1241 N. Ellis Bensenville, IL 60106  <b><u>PLEASE SEND ALL CORRESPONDENCE TO</u></b> <b><u>"CONTACT POINT" LISTED BELOW</u></b> <input type="checkbox"/> Check if this is a new address		6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to:  EPA Reg. No. <u>88341-2</u>  Product Name <u>PureCide® 25</u>	
<b>Section - II</b>			
<input type="checkbox"/> Amendment - Explain below. <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> Notification - Explain below.		<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input checked="" type="checkbox"/> "Me Too" Application <input type="checkbox"/> Other - Explain below	
<b>Explanation:</b> Use additional page(s) if necessary. (For section I and Section II.)  Submission of PRIA registration application (A531) for the product PureCide® 7.5.			
<b>Section - III</b>			
1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Unit Packaging wgt.      No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Package wgt.      No. per container	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
*Certification must be submitted			
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
<b>Section - IV</b>			
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)			
Name Sherri Gray		Title Authorized Representative	Telephone No. (Include Area Code) 703-626-8968
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received  <b>(Stamped)</b>
2. Signature 		President	
4. Typed Name Robert Sullivan		5. Date June 18, 2015	



**Sherri Gray | Environmental Consulting**

LLC

15616 Plain Dealing Place  
Manassas, VA 20112  
ph 703.628.8968  
e sgray@epaconsultant.net  
w www.epaconsultant.net

Jun 30, 2015

Demson Fuller  
Antimicrobials Division, PM Team 32  
U S Environmental Protection Agency  
Office of Pesticide Programs (7504P)  
Document Processing Desk (PRIA)  
Room S-4900, One Potomac Yard  
2777 South Crystal Drive  
Arlington, VA 22202

Subject: PureCide® 7.5  
EPA File Symbol Number 88341-A  
PRIA (A531)

Dear Mr. Fuller:

On behalf of our client T.A. Comb, LLC (1241 N. Ellis, Bensenville, IL 60106, EPA Company Number 88341) we are submitting a PRIA (A531) for review, for PureCide® 7.5 (EPA File Symbol Number 88341-A). The following items are enclosed in support of this PRIA action:

- Application for Pesticide Registration, EPA 8570-1 Form;
- Certification with Respect to Citation of Data, EPA 8570-34 Form;
- Confidential Statement of Formula, EPA 8570-4 Form;
- Data Matrix, EPA 8570-35 Form;
- Product Chemistry Reports;
- Copy of PRIA fee payment; and
- Product Label (5 copies) ✕

Please contact me if you have any questions at (703) 628-8968 or sherrigray@epaconsultant.net.

Sincerely,

Sherri Gray  
Authorized Representative of  
T.A. Comb, LLC

Enclosures

cc: Bob Sullivan, T.A. Comb, LLC

*✕ Not included  
2 copies added by  
AD during PRP coding  
Am*



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**1200 Pennsylvania Avenue, N.W.**  
**Washington, D.C. 20460**

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**Certification with Respect to Citation of Data**

<b>Applicant's/Registrant's Name, Address, and Telephone Number</b> T.A. Comb, LLC, 1241 N. Ellis, Bensenville, IL 60106, (312) 725-4029	<b>EPA Registration Number/File Symbol</b> 88341-A
<b>Active Ingredient(s) and/or representative test compound(s)</b> Sodium chloride	<b>Date</b> June 18, 2015
<b>General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158)</b> Treatment of recirculating cooling water towers, aquatic systems, raw and processed agricultural commodities, and poultry processing water.	<b>Product Name</b> PureCide® 7.5

**NOTE:** If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

**SECTION I: METHOD OF DATA SUPPORT (Check one method only)**

<input checked="" type="checkbox"/> I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	<input type="checkbox"/> I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).
---	--

**SECTION II: GENERAL OFFER TO PAY**

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

**SECTION III: CERTIFICATION**

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

<b>Signature</b> 	<b>Date</b> June 18, 2015	<b>Typed or Printed Name and Title</b> Robert Sullivan, President
----------------------	------------------------------	--

EPA Form 8570-34 (12-2003) Electronic and Paper versions available. Submit only Paper version.

## A531 – New product identical or substantially similar in composition and use to registered product

- Registered source of active ingredient, selective data citation only for data on product chemistry and/or acute toxicity and/or public health pest efficacy.
- Must identify substantially similar product. Typically chemistry data must be submitted

End Use (EP) or Manufacturing Use (MP) product or Technical Grade of the Active Ingredient (TGAi)

Guideline No.	Group A: Product Chemistry Data Study Title	EP Data Submitted	MP Data Submitted	TGAi Data Submitted
830.1550	Product Identity & Composition	✓		
830.1600	Description of materials used to produce the product	✓		
830.1650	Description of formulation process	✓		
830.1670	Discussion on the formation of impurities	✓		
830.1700	Preliminary analysis	✓		
830.1750	Certified limits (158.345)	✓		
830.1800	Enforcement analytical method	✓		

Guideline No.	Group B: Product Chemistry Data Study Title	EP Data Submitted	MP Data Submitted	TGAi Data Submitted
830.6302	Color	✓		
830.6303	Physical State	✓		
830.6304	Odor	✓		
830.6313	Stability to normal and elevated temperatures metal and metal ions			
830.6314	Oxidation/Reduction (Chemical incompatibility)	✓		
830.6315	Flammability	✓		
830.6316	Explosibility	✓		
830.6317	Storage stability*	✓		
830.6319	Miscibility	✓		
830.6320	Corrosion Characteristics*	✓		
830.6321	Dielectric Breakdown Voltage	✓		
830.7000	pH	✓		
830.7050	UV/ Visible Absorption			
830.7100	Viscosity	✓		
830.7200	Melting Point			
830.7220	Boiling Point			
830.7300	Density	✓		
830.7370	Dissociation Constant			
830.7550	Partition Coefficient			
830.7840	Water Solubility			
830.7950	Vapor Pressure			

Grayed out = data not required

\*May not be included with initial application

## A531– Acute Toxicity Requirements

- Must use cite-all data citation for studies listed below


Guideline No.	Acute toxicity (6 pack) Study Title	Cite All	Selective
870.1100	Acute Oral (LD50)		✓
870.1200	Acute Dermal (LD50)		✓
870.1300	Acute Inhalation (LC50)		✓
870.2400	Acute Eye Irritation		✓
870.2500	Acute Dermal Irritation		✓
870.2600	Dermal Sensitization		✓

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.  
Washington, D.C. 20460

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## DATA MATRIX

Date: June 18, 2015		EPA Reg No./File Symbol: 88341-A		Page 1 of 2	
Applicant's/Registrant's Name & Address: T.A. Comb, LLC 1241 N. Ellis Bensenville, IL 60106		Product:  PureCide® 7.5			
Ingredient: sodium chlorate					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
<b>Product Chemistry (Group A)</b>					
830.1550	Product Identity and composition		T.A. Comb, LLC	OWN	
830.1600	Description of starting materials		T.A. Comb, LLC	OWN	
830.1620	Description of production process		T.A. Comb, LLC	OWN	
830.1650	Description of formulation process		T.A. Comb, LLC	OWN	
830.1670	Discussion of formation of impurities		T.A. Comb, LLC	OWN	
830.1700	Preliminary analysis		T.A. Comb, LLC	OWN	
830.1750	Certified limits		T.A. Comb, LLC	OWN	
830.1800	Enforcement analytical method		T.A. Comb, LLC	OWN	
830.1900	Submittal of samples		T.A. Comb, LLC	OWN	
<b>Product Chemistry (Group B)</b>					
830.6302	Color		T.A. Comb, LLC	OWN	
830.6303	Physical state		T.A. Comb, LLC	OWN	
830.6304	Odor		T.A. Comb, LLC	OWN	
830.7220	Boiling point		T.A. Comb, LLC	OWN	
830.7300	Density		T.A. Comb, LLC	OWN	
830.7840/830.7860	Solubility		T.A. Comb, LLC	OWN	
830.7950	Vapor pressure		T.A. Comb, LLC	OWN	
830.7370	Dissociation constant		T.A. Comb, LLC	OWN	
830.7550/830.7560/830.7570	Partition Coefficient - n-octanol/water		T.A. Comb, LLC	OWN	
Signature: 			Name and Title: Robert Sullivan, President		Date: 06/18/15

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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## DATA MATRIX

Date: June 18, 2015 EPA Reg No./File Symbol 88341-A Page 2 of 2

Applicant's/Registrant's Name &amp; Address:

T.A. Comb, LLC

1241 N. Ellis

Bensenville, IL 60106

Product:

PureCide® 7.5

Ingredient: sodium chlorite

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Notes
----------------------------	----------------------	-------------	-----------	--------	-------

**Product Chemistry (Group B) – continued**

830.7000	pH		T.A. Comb, LLC	OWN	
830.6313	Stability		T.A. Comb, LLC	OWN	
830.6314	Oxidizing/Reducing action		T.A. Comb, LLC	OWN	
830.6315	Flammability		T.A. Comb, LLC	OWN	
830.6316	Explosibility		T.A. Comb, LLC	OWN	
830.6317	Storage stability		T.A. Comb, LLC	OWN	
830.7100	Viscosity		T.A. Comb, LLC	OWN	
830.6319	Miscibility		T.A. Comb, LLC	OWN	
830.6320	Corrosion Characteristics		T.A. Comb, LLC	OWN	
830.6321	Dielectric Breakdown Voltage		T.A. Comb, LLC	OWN	

**Acute Toxicology**

870.1100	Acute Oral Toxicity-rat	00155965	Arkema, Inc.	OLD	
870.1200	Acute Dermal Toxicity	00155964	Arkema, Inc.	OLD	
870.1300	Acute Inhalation Toxicity-rat	42484101	Sodium Chlorite-Chlorine Dioxide Panel	OLD	
870.2400	Primary Eye Irritation	00155963	Arkema, Inc.	OLD	
870.2500	Primary Dermal Irritation	00155962	Arkema, Inc.	OLD	
870.2600	Dermal Sensitization	44321708	BASF Corporation	OLD	

Signature



Name and Title

Robert Sullivan, President

Date

06/18/15

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Form Approved OMB No. 2070-0060

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DATA MATRIX

Date: June 18, 2015

EPA Reg No./File Symbol 88341-A

Page 1 of 2

Applicant's/Registrant's Name & Address

Product:

T.A. Comb, LLC  
1241 N. Ellis  
Bensenville, IL 60106

PureCide® 7.5

Ingredient sodium chlorite

Guideline Reference Number

Guideline Study Name

MRID Number

Submitter

Status

Note

T.A. Comb, LLC	OWN	
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T.A. Comb, LLC	OWN	
T.A. Comb, LLC	OWN	
T.A. Comb, LLC	OWN	

Signature

*Robert Sullivan*

Name and Title

Robert Sullivan, President

Date

06/18/15

EPA Form 8570-55 (9-97) Electronic and Paper versions available. Submit only Paper version.

Public File Copy

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.

Washington, D.C. 20460

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## DATA MATRIX

Date: June 18, 2015	EPA Reg No./File Symbol 88341-A	Page 2 of 2
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			T.A. Comb, LLC	OWN	
			T.A. Comb, LLC	OWN	
			Arkema, Inc.	OLD	
			Arkema, Inc.	OLD	
			Sodium Chlorite-Chlorine Dioxide Panel	OLD	
			Arkema, Inc.	OLD	
			Arkema, Inc.	OLD	
			BASF Corporation	OLD	
Signature			Name and Title	Date	
			Robert Sullivan, President	06/18/15	

EPA Form 3570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Public File Copy

# PureCide® 7.5

ACTIVE INGREDIENT:	
SODIUM CHLORITE.....	7.50%
INERT INGREDIENTS.....	92.50%
TOTAL.....	100.0%

**KEEP OUT OF REACH OF CHILDREN**

## DANGER

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> <li>▪ Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>▪ Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li> <li>▪ Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> <li>▪ Take off contaminated clothing.</li> <li>▪ Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>▪ Call a poison control center or doctor for treatment advice if burning or irritation of skin persists.</li> </ul>
IF SWALLOWED	<ul style="list-style-type: none"> <li>▪ Have person sip a glass of water if able to swallow.</li> <li>▪ Call a poison control center or doctor immediately for treatment advice.</li> <li>▪ Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>▪ Do not give to an unconscious person.</li> </ul>
IF INHALED	<ul style="list-style-type: none"> <li>▪ Move person to fresh air and monitor for respiratory distress.</li> <li>▪ If cough or difficulty in breathing develops, consult a physician immediately.</li> <li>▪ If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>▪ Call a poison control center or doctor for further treatment advice.</li> </ul>
<p><b>For emergency information call: 800-424-9300 (24 hours)</b>            Have the product container or label with you when calling a poison control center or doctor or going to treatment.</p>	
<p><b>NOTE TO PHYSICIAN</b>            Probable mucosal damage may contraindicate for the use of gastric lavage.</p>	

**TA COMB, LLC**  
1241 N. Ellis  
Bensenville, IL 60106

EPA Reg. No. 88341-A  
EPA Est. No.

Lot# \_\_\_\_\_

Net Contents \_\_\_\_\_ Gallons

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS & DOMESTIC ANIMALS  
DANGER**

**Corrosive.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. May be harmful if inhaled. Do not get in eyes, on skin or on clothing. Wear protective eyewear (splash proof goggles). Wear protective clothing and rubber gloves when handling this product. Avoid breathing mists or fumes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing to avoid fire.

**ENVIRONMENTAL HAZARDS**

This product is potentially toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL AND CHEMICAL HAZARDS**

Dry sodium chlorite is a strong oxidizing agent. This product is incompatible with strong acids, oxidizing agents, and reducing agents. This product becomes a fire or explosive hazard if allowed to dry. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter. Do not use moist or damp utensils.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

## **DIRECTIONS FOR CONTROLLING THE GROWTH OF ALGAE IN RECIRCULATING COOLING WATER TOWERS**

1. Clean badly fouled systems before starting treatment.
2. When algae are visible, add an initial dosage of 22 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system. Repeat if necessary until control is evident.
3. Where algae control is evident, use a subsequent dose of 11 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system twice a week or as needed to maintain control.
4. Add PureCide® 7.5 directly to the cooling tower drip pan (cold water basin) near the inlet to the recirculating pump.

## **Directions for Use in the Chemical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Microorganism or Mollusk Control, and as a Chemical Oxidant in Aquatic Systems**

**User is responsible for compliance with applicable Federal, state and local laws regarding proper use and disposal of the chlorine dioxide generated.**

**Feed requirements:** Feed rates of PureCide® 7.5 will depend on the severity of contamination and the degree of control desired. The exact dosage will depend on the size of the system and residual necessary for effective control. Depending on the generator type, PureCide® 7.5 may be diluted with water at the point of use to prepare a lower % active aqueous solution for use in chlorine dioxide generators.

Some examples of industrial applications of chlorine dioxide include:

- Potable water disinfection and removal of sulfide
- Control of bacterial slime and algae and mollusks in industrial recirculating and one-pass cooling systems
- Biocontrol in food processing flumes, water-using equipment, cooling water, and recycled waters.
- Disinfection of sewage and plant wastes.
- Destruction of phenolics, simple cyanides and sulfides by chemical oxidation.
- Bacterial slime control in white water paper mill systems.
- Bacterial control in oil well and petroleum systems.

**Method of feed:** Large amounts of chlorine dioxide ( $\text{ClO}_2$ ) can be generated by several common methods, including:

1. The chlorine method which utilizes a sodium chlorite solution and chlorine gas, or
2. The hypochlorite method which utilizes a sodium chlorite solution, a hypochlorite solution, and an acid, or
3. The Acid-chlorite method, which utilizes a sodium chlorite solution and an acid, or
4. The electrolytic method, which utilizes a sodium chlorite solution, with sodium chlorite added, as needed.

Your T.A. Comb representative can guide you in the selection, installation and operation

for feed systems.

### **Potable Water Treatment**

The selected generator should be equipped with a sensor that detects the concentration of  $\text{ClO}_2$  that is produced. In addition, the generator should be periodically calibrated according to the manufacturer's instructions and/or by using standard chlorine dioxide, quantitated by iodometric titration. Read the instructions on the chlorine dioxide generation system before using this product.

$\text{ClO}_2$  is used as both an oxidant and a disinfectant in drinking water treatment. For most municipal and public potable water systems, a chlorine dioxide residual concentration of 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

### **Industrial Cooling Water Treatment**

For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required dosages will vary depending on the exact application and the degree of contamination present. The required  $\text{ClO}_2$  residual concentrations range between 0.1 and 5.0 ppm. Chlorine dioxide may be applied either continuously or intermittently. The typical chlorine dioxide residual concentration range is 0.1 - 1.0 ppm for continuous doses, and 0.1 - 5.0 ppm for intermittent doses. The minimum acceptable residual concentration of  $\text{ClO}_2$  is 0.1 ppm for a minimum one minute contact time.

### **Mollusk Control in Water Systems**

$\text{ClO}_2$  generated from sodium chlorite may be used for mollusk control in commercial and industrial recirculating and one-pass cooling water systems. The required dosages will vary with the system type, system conditions, the degree of water contamination present and the desired level of control. Depending on the extent of the infestation, sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve the necessary  $\text{ClO}_2$  residual concentration.

Veliger Control: Maintain a continuous chlorine dioxide residual of 0.1 - 0.5 ppm.

Intermittent Dose: Apply  $\text{ClO}_2$  to obtain a chlorine dioxide residual concentration of 0.2 - 25 ppm. Repeat as necessary to maintain control.

Continuous Dose: Maintain a  $\text{ClO}_2$  residual concentration of up to 2 ppm.

### **Food Plant Process Water Treatment**

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems, cheese brine and hydro coolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system,  $\text{ClO}_2$  should be applied continuously or intermittently to achieve a  $\text{ClO}_2$  residual concentration between 0.25 and 5.0 ppm.

Water containing up to 3 ppm residual  $\text{ClO}_2$  may be used to:

- (1) Provide microbial control in wash or process water for fruit and vegetable raw agricultural commodities.
- (2) Control spoilage and decay causing non-public health microorganisms present in the wash or process water for fruit and vegetable raw agricultural commodities.
- (3) Provide microbial control in poultry chiller water.

Water containing up to 3 ppm residual chlorine dioxide may be used for washing fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with chlorine dioxide must be followed by a potable water rinse, or by blanching, cooking or canning.

$\text{ClO}_2$  gas may be used for fumigating fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with  $\text{ClO}_2$  in a closed chamber system must be followed by a potable water rinse, or by blanching, cooking or canning.

#### **Wastewater Treatment**

$\text{ClO}_2$  is effective as both a disinfectant and an oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a chlorine dioxide residual concentration of up to 5 ppm is sufficient to provide adequate disinfection.

For sulfide odor control, between pH 5-9, a minimum of 5.2 ppm (wt) of  $\text{ClO}_2$  should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8, 1.5 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol; at pH greater than 10, 3.3 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol.

#### **Bacterial Slime Control in Paper Mills**

$\text{ClO}_2$  generated from sodium chlorite is effective for use in controlling microbiological growth in white water paper mill systems. The required dosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, sodium chlorite should be applied continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.

#### **Directions for Use in Controlling Microbial Population in Poultry Processing Water**

$\text{ClO}_2$  generated from this product may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does

not exceed 3 ppm, as determined by an appropriate method in accordance with 21CFR§173.300.

For treatment of poultry chill water, apply this product as necessary through a ClO<sub>2</sub> generation system to maintain a residual concentration of up to 3 ppm.

#### **Bacterial Control in Oil Wells and Petroleum Systems**

ClO<sub>2</sub> is effective in the remediation of bacterial and sulfide contamination commonly found in oilfield production, injection and disposal fluids. The required dosages will vary with process conditions. ClO<sub>2</sub> may be applied either continuously or intermittently to oil well production water as it is separated from the oil, and before it is re-injected into the well.

For continuous feeds, ClO<sub>2</sub> may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, chlorine dioxide should be applied at a shock dosage of 200-3000 ppm.

**FOR USE ONLY WITH PURELINE® TREATMENT SYSTEMS FOR GENERATING CHLORINE DIOXIDE GAS TO APPLY AS A FUMIGANT to inhibit odor causing bacteria and odor causing microorganisms, and TO CONTROL MOLD AND MILDEW ON HARD, NON-POROUS AND POROUS SURFACES IN/ON BUILDINGS AND THEIR CONTENTS**

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Handlers/applicators must wear:

- Long sleeve shirt and long pants
- Shoes plus socks
- Full face protective respirator using cartridges for chlorine dioxide gas, when concentrations are at or below 5.0 ppm. Use NIOSH/MSHA approval TC-13F-314 Low Pressure Self Contained SCBA Respirator for gas concentrations above 5.0 ppm.
- Waterproof gloves

#### **OVERALL APPROACH TO FUMIGATION AND REMEDIATION**

The objective of ClO<sub>2</sub> fumigation is to effectively treat mold and mildew contamination, and odor causing bacteria and microorganisms present within buildings under operating conditions that protect site workers, the surrounding community and the environment.

Each fumigated building or subpart thereof is properly tented or sealed. During fumigation, operational parameters are monitored at an appropriate number of co-located ClO<sub>2</sub> gas sampling points. At the end of fumigation, the addition of ClO<sub>2</sub> gas is terminated and natural decay of the gas within the building begins. The building is aired out for the final stage. Building decay or ClO<sub>2</sub> removal continues until such time that ClO<sub>2</sub> concentration levels at all monitoring points have fallen below the Occupational Safety and Health Administration (OSHA) eight-hour time-weighted average (TWA)

permissible exposure level (PEL) of 0.1 ppm, at which time the building is re-entered by fumigation personnel.

The user of this product shall develop a site-specific Safety Plan of Action (SPA) that follows these label instructions and takes into account site-specific information such as the size of the structure, its contents, condition, etc.

## **SPECIFIC USE INSTRUCTIONS**

### **Site Preparation**

To the extent feasible, remove debris, non-reusable items and water-soaked materials. Eliminate any sources of water (e.g. roof leaks, damaged plumbing, etc.) that may contribute to further water damage and/or mold and/or bacteria growth. Open any enclosed spaces to allow maximum exposure to the ClO<sub>2</sub> gas during fumigation.

### **Building Containment**

Tent the building undergoing fumigation completely with a material proven to be impervious to ClO<sub>2</sub> gas, or effectively seal the building through utilization of sealing materials such as tape, caulking, etc. in all external cracks, crevices, etc. through which ClO<sub>2</sub> might otherwise escape during fumigation.

### **Negative Air Pressure**

Contain ClO<sub>2</sub> gas in the building through use of a negative air pressure system to maintain a slight negative pressure on the internal walls and ceiling of the building at all times.

Pause the fumigation process immediately should ClO<sub>2</sub> breakthrough be observed at any time outside the contained area until the cause of breakthrough is ascertained and corrective measures are implemented as necessary.

### **Chlorine Dioxide Generation**

Generate ClO<sub>2</sub> in a ClO<sub>2</sub> generation system that produces ClO<sub>2</sub> gas through the use of an electrolytic generation system. The system reacts, PureCide® 7.5 sodium chlorite solution in electrolytic cells producing ClO<sub>2</sub>. Follow the label directions of that product. The ClO<sub>2</sub> gas generated will be pumped from the machine to the building.

### **Chlorine Dioxide Removal**

At the conclusion of fumigation, allow residual ClO<sub>2</sub> gas remaining in the building to decay naturally, or if quicker removal of ClO<sub>2</sub> is desired, allow fresh air to enter building.

### **Chemical Storage**

Store chemicals in drums, (5, 30 or 55 gal) depending on the size of the building being fumigated. Store all precursor and neutralization chemicals within secondary containment areas.

### **Process Wastewater**

Store wastewater generated by the fumigation process temporarily in a dedicated on-site storage tank. Collect and analyze representative samples of the wastewater for purposes of waste profiling. If the wastewater is determined to be non-hazardous, dispose of into the sanitary sewer system if allowed by the local publicly owned treatment works. Otherwise, send off site to a permitted non-hazardous wastewater treatment facility.

### **Ancillary Equipment**

Provide standby electrical generation power to provide power to critical fumigation systems should utility power to a fumigation site be interrupted at any time.

### **Equipment Testing**

Test all key fumigation system components as they are installed to ensure that all subsystems will operate as designed.

Before commencing the fumigation, conduct a low-level "pulse" test in which all subsystems are simultaneously challenged as if it were the actual fumigation, with the exception that significantly lower ClO<sub>2</sub> concentration levels are used (i.e., 200 to 500 ppm) than those used during the actual fumigation process and ClO<sub>2</sub> is introduced into the building for a much shorter duration (i.e., 15-30 minutes). Design and conduct the test such that all elements that support the fumigation are proven functional, operational and effective.

### **Fumigation Operation Sequencing**

Perform fumigation activities in the following operational sequence to ensure safety and efficacy of the process.

<b>Task Number</b>	<b>Task Description</b>
1	Verify spill containment supplies are in place
2	Verify necessary chemical inventory is in place
3	Verify acceptable meteorological conditions exist
4	Conduct pre-fumigation safety meeting
5	Verify Emergency Response Team is in place
6	Verify Operations Team is in place
7	Confirm all personnel are out of building
8	Initial ClO <sub>2</sub> generation
9	Initiate ClO <sub>2</sub> concentration "ramp-up"
10	Initiate internal and external ClO <sub>2</sub> gas sampling
11	Achieve minimum desired ClO <sub>2</sub> concentration to start CT clock
12	Maintain ClO <sub>2</sub> concentration above target level
13	Terminate ClO <sub>2</sub> generation
14	Terminate gas sampling when ClO <sub>2</sub> < 0.1 ppm
15	Conduct building inspection entry

### **Temperature Monitoring**

Monitor temperature at an appropriate number of co-located building locations through use of HOBO® U12-011 TEMP/RH Data Loggers. The instrument has a measuring range of -4 to 158°F with an accuracy of  $\pm 0.63^\circ\text{F}$ . Take measurement of 5-minute intervals during the conditioning, fumigation and aeration phases of the process. Obtain a local readout of temperature readings by connecting the data loggers to a PC via USB cable from the various monitoring locations. Log data in the monitor during fumigation and download for manipulation following fumigation.

### **Chlorine Dioxide Monitoring**

Monitor  $\text{ClO}_2$  concentration levels by means of a composite sample collection system constructed of 1/4-in inside diameter high-density polyethylene (HDPE) tubing. HDPE tubing has been shown to be non-reactive with  $\text{ClO}_2$ . Run the tubing from an appropriate number of co-located monitoring locations inside the building to a central sampling manifold located outside the building. Have knowledgeable air-sampling technicians collect samples and deliver them to an on-site gas laboratory for analysis.

### **USE PRECAUTIONS**

Conduct fumigation operations in a manner that protects both workers and members of the general public from exposure to fumigation process chemicals through implementation of specifically designed safety measures.

### **Worker Safety**

#### **Site-Specific Health and Safety Plan**

Develop a Site-Specific Health and Safety Plan (HASP) to establish safe working and operating conditions for both fumigation preparation activities and fumigation operations. Prepare the HASP in accordance with applicable OSHA guidelines and regulations.

#### **Health and Safety Training**

Establish minimum health and safety training requirements for all personnel involved in fumigation operations. Do not allow workers to participate in, or supervise field activities until they have been trained to a level required by their job function and responsibility. Cover appropriate elements during initial training including: (1) names of personnel and alternates responsible for site safety and health; (2) safety, health and other hazards present on site; (3) proper use, care and maintenance of PPE; (4) work practices by which the worker can minimize risks from hazards; (5) safe use of engineering controls and equipment on site; (6) medical surveillance requirements, including recognition of symptoms and signs which might indicate over exposure to hazards; and (7) contents of the site HASP.

In addition to initial training, provide Hazard Communication (HAZCOM) and Respiratory Protection training. In HAZCOM training, provide information on the possible types of biological or chemical agent contamination present within a facility, as well as the chemical substances stored and generated on-site, including physical

properties, fire and explosion data, reactivity data, health hazard data, emergency and first aid procedures, spill and leak procedures, etc. In Respiratory Protection training, provide information about the proper selection, fitting, use, care and maintenance of respirators, with an emphasis on specific respirators worn if responding to an emergency involving either a chemical release or a fire. Provide basic First Aid and CPR training to all personnel who might be involved in a response to a medical emergency on-site.

Provide an orientation briefing to individuals who are on-site for short periods of time performing limited tasks as either visitors or contractors, including an overview of the site-specific HASP and a discussion of the facility layout. Also make these individuals aware of evacuation notification procedures and alert them to the pre-determined emergency response Rally Points or places of safe refuge where they should report in the event of an emergency.

### **Post-Fumigation Building Re-Entry Requirements**

Establish a post-fumigation building re-entry requirements that prohibits workers from re-entering the building in OSHA Level D protective equipment until such time that it has been demonstrated that the concentration of  $\text{ClO}_2$  at all monitoring points has fallen to a level below the applicable OSHA TWA PEL standard at 0.1 ppm.

## **Public Safety**

### **Site Emergency Planning**

Conduct meetings on-site periodically to discuss project roles and responsibilities, site communication procedures, hazardous materials storage issues and potential hazards. The goal of these meetings should be to gain consensus with regard to roles and responsibilities during potential emergency events.

### **Site Security**

Establish site security measures to prevent unauthorized entry to the site and secure the site perimeter during on-going fumigation preparation activities. Include site entry control procedures, personnel responsibilities, facility lighting requirements and emergency communication procedures.

### **Specialized Training**

Provide specialized training to prepare site personnel to respond to a variety of potential emergency event scenarios that might occur during fumigation preparation activities or during the fumigation itself including a fire inside or outside the building, chemical spill and/or a release of a significant amount of the fumigant to the atmosphere during fumigation.

### **Emergency Response Supplies and PPE**

Stage appropriate spill response supplies suitable for cleanup of hazardous materials being stored on-site in close proximity to the stored materials. Also stage a variety of

PPE, including Self-Contained Breathing Apparatus, at appropriate locations for use in an emergency response to a potential hazardous material release.

### **Site Communications**

Assign two-way radios to key personnel at the site. Two-way radios facilitate effective communication among all parties at the worksite and allow for careful monitoring of work tasks by individuals responsible for initiating and performing emergency response activities. Use separate channels for work being performed inside and outside the building so that individuals monitoring the work can effectively monitor tasks being performed in both locations simultaneously.

### **Surface and Ground Water Protection**

Protect surface and ground water supplies by containing any chemical release that might occur within a secondary containment area and respond with absorbents and neutralizing agents stored on-site. Place impervious spill mats in close proximity to storm drains in the vicinity of chemical storage areas where necessary. Deploy these mats immediately to cover drainage catch basins in the event of a chemical release from a primary storage vessel.

### **Site Evacuation Contingency Plan**

Develop specific procedures to respond to a potential emergency response scenarios that might occur during fumigation preparation operations or the fumigation itself. Identify a Site Safety and Health Officer (SSHO) who is responsible for determining when on-site personnel should "Shelter-In-Place" or evacuate the site should an emergency evacuation of the site be contemplated.

### **Fire Response**

Place fire extinguishers throughout the site, both inside and outside the building, for use in fighting an incipient-stage fire. Also, activate existing operational building fire suppression systems in the event of a fire inside the building.

In the event that a fire is detected either inside or outside the building, implement a series of predetermined response measures including the following:

- The individual who identifies the fire immediately alerts their Supervisor, the SSHO and the Emergency Response Coordinator (ERC) for the site.
- If the individual who identified the existence of the fire can immediately extinguish it with a local fire extinguisher without endangering themselves or others, they extinguish the fire while the ERC is assembling the on-site Emergency Response Team (ERT).
- The on-site ERT dons proper PPE and initiates emergency response activities. The ERT is provided with PPE as warranted by the nature of the fire.

- Potentially affected electrical systems are deactivated as soon as possible, if appropriate, to prevent a spread of the fire.
- After donning appropriate PPE, the source and nature of the fire are investigated. If the fire is determined to be in its incipient stage, the ERT attempts to distinguish the fire. If a fire either inside or outside the building is determined to be beyond the incipient stage, the SSHO or ERC immediately requests the assistance of external emergency fire response authorities.
- The SSHO notifies all site workers to cease their activities, shutdown all process equipment and report to a designated location so that a "headcount" may be taken to account for all personnel.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- If the fire emergency also involves a release of hazardous materials, the release is addressed in accordance with the response measures outlined in the Plan.
- If necessary, based on the size and scope of the fire, the SSHO notifies appropriate external authorities and provides them with appropriate information about the fire.

### **Chemical Spill Response**

Locate all storage vessels within secondary containment areas. Store incompatible materials within separate secondary containments. Place impervious spill mats near all storm water catch basins in the vicinity of chemical storage areas where necessary to prevent inadvertent discharge of chemicals through the storm drain sewer system in the event of a leak or other accidental release.

In the event that a hazardous material leak from a storage vessel or associated piping is detected, implement a series of predetermined response measures including the following:

- The individual who identified the release immediately alerts their Supervisor, the SSHO and the ERC for the site.
- The ERC assembles the on-site ERT, who don proper PPE and initial response activities. The ERT is provided with PPE as warranted by the nature of the hazardous material release.
- After donning appropriate PPE, the source and nature of the release are investigated and the release is stopped at its source (if safe to do so). Spill mats are placed over storm drain catch basins to prevent discharge of spilled material

to the storm water drainage system and/or to ground water where necessary. Any sources of ignition present in the area are also eliminated.

- If any personnel have been affected by the release, they are evacuated from the area of impact as soon as possible and first aid administered as appropriate. If necessary, external medical emergency response authorities are summoned.
- Only members of the ERT involved in overseeing or performing emergency operations are allowed within the designated hazard area. If possible, the area is roped or otherwise blocked off. If a release cannot be immediately contained within a containment area, an isolation area is established around the spill, using sorbent and neutralizing materials.
- In the event a release breaches onsite secondary containment, the leading edge around the spill is contained with neutralizing agents and/or absorbents or other appropriate materials. Pumps may be employed to transfer spilled liquids to on-site waste tanks and for the removal of any liquid that may congregate at low points or depressions on surfaces.
- If the total amount of hazardous material released is less than the equivalent volume of 300 gallons, spill response materials and equipment located on-site are utilized to contain and collect the waste.
- Collected waste material is stored in secure storage containers for future disposal.
- If the amount of hazardous material released is greater than that which can be contained and collected for disposal by the on-site ERT, arrangements are made with an external contractor to respond to the site with adequate supplies and equipment to perform necessary clean-up operations.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- The SSHO notifies external emergency response authorities if deemed necessary by the size and scope of the release. External emergency response authorities will take appropriate actions if required to safeguard the surrounding community.
- Following the initial spill response, provisions are made to conduct a full environmental assessment to delineate impacted areas. Hazardous materials generated from a release are disposed of off-site in accordance with applicable laws and regulations.

### **Building ClO<sub>2</sub> Leak Detection and Repair**

Perform ambient air monitoring during both the low-level “pulse” test and the actual fumigation to identify leaks of ClO<sub>2</sub> gas from the building so that appropriate action may be taken in the event a leak is detected. Whenever possible, repair building leaks immediately using appropriate patching materials.

Dispatch teams of trained employees to the immediate perimeters of the building, and to the rooftop where appropriate, as soon as ClO<sub>2</sub> liquid begins flowing from the generator to the emitters. Initially assign at least two teams to building monitoring duties. Each team should consist of at least two individuals, each having had sufficient previous experience with ClO<sub>2</sub> to readily identify its characteristic odor in air.

Equip each monitoring team with a calibrated Industrial Scientific Gas Monitor with a ClO<sub>2</sub> sensor capable of detecting ClO<sub>2</sub> gas and reporting TWA readings for purpose of comparison with OSHA’s eight-hour TWA PEL and the American Conference of Governmental Industrial Hygienists (ACGIH) recommended 15-minute TWA Short Term Exposure Limit (STEL) of 0.3 ppm and the OSHA PEL is 0.1 ppm. Because the human olfactory response to ClO<sub>2</sub> has been shown through experience to be far more sensitive than any commercially-available hand-held monitoring technology, the primary objective of using the monitor is not to identify the presence of ClO<sub>2</sub> emissions, but rather to make sure that team members are not being exposed to concentrations of the gas that are in excess of prescribed standards and recommended threshold levels while they are performing their ambient monitoring and repair assignments. In the event that ClO<sub>2</sub> readings above the 0.1 ppm eight-hour OSHA standard or the 0.3 ppm 15-minute ACGIH STEL are registered by a monitor during fumigation, the team identifying the reading should leave the area where the elevated reading was identified and don appropriate respiratory protection before continuing work in the area. A full-face negative pressure respirator with combination P-100 filter/acid gas cartridges should be used for ClO<sub>2</sub> concentrations above an applicable exposure standard but less than 5 ppm. A self-contained breathing apparatus and appropriate skin protection must be used in any atmosphere containing more than 5 ppm ClO<sub>2</sub>.

Identify potential sources of ClO<sub>2</sub> emissions from the top and sides of the building and immediately perform any repairs and/or modifications necessary to eliminate or reduce emissions to the greatest degree possible. Also, communicate monitoring findings to the Project Manager so that operational changes and/or shutdown of fumigation operations can be initiated immediately in the event that a leak cannot be effectively patched in a reasonable period of time. When a building leak cannot be quickly and effectively repaired, adjust operational parameters as necessary to mitigate the leak or terminate the fumigation process to eliminate exposure risk to the surrounding community.

### **Adjustment of Operational Parameters**

In the event a ClO<sub>2</sub> leak cannot be promptly repaired through use of available patching materials, adjust fumigation operating parameters, either temporarily or for the remaining duration of the fumigation, to prevent additional gas from escaping the building into the surrounding environment.

Increase the NAU fan speed upwards to increase the negative pressure level on the internal walls and ceiling of the building and/or decrease the target ClO<sub>2</sub> concentration level being applied to the building to lower the concentration of ClO<sub>2</sub> in air escaping through the leak.

#### **Termination of Fumigation Process**

Should it be determined that a significant ClO<sub>2</sub> leak cannot be effectively repaired, nor can the magnitude of the leak be substantially mitigated through adjustment of operational parameters, terminate the fumigation process and take necessary measures to remove residual gas from the building.

#### **Post Fumigation Repair and Cleaning**

Remove any remaining debris, non-reusable items and water soaked materials. Replace, repair or clean damaged areas of structure as needed. For additional information and guidance on mold remediation, see EPA's website at [www.epa.gov/mold](http://www.epa.gov/mold).

### **STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Do not contaminate water, food or feed by storage or disposal. Keep product in tightly closed container when not in use. Don't drop, roll or skid drum. Keep upright. Always replace cover. Store in a cool, dry, well-ventilated area away from heat or open flame.

**EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and well-ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large quantities of water. Any unopened drums near the fire should be cooled by spraying with water.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### **CONTAINER HANDLING:**

**For non-refillable solid containers smaller than 50 lbs.**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container

over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning.

**For non-refillable solid containers that are larger than 50lbs.**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning if appropriate. Triple Rinse container promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or mix tank or store rinsate for later use or disposal. Repeat the procedure two more times.

For refillable containers, all sizes.

Refillable container. Refill this container with PureCide® 7.5 only. Do not reuse this container for any other purpose. Cleaning or pressure rinsing the container is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

**WARRANTY**

**TA Comb, LLC** warrants that this product complies with the specifications expressed on the label. To the extent consistent with applicable law, **TA Comb, LLC** makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose.

# PureCide® 7.5

## ACTIVE INGREDIENT:

SODIUM CHLORITE.....	7.50%
INERT INGREDIENTS.....	92.50%
TOTAL.....	100.0%

**KEEP OUT OF REACH OF CHILDREN**

## DANGER

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> <li>▪ Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>▪ Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.</li> <li>▪ Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> <li>▪ Take off contaminated clothing.</li> <li>▪ Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>▪ Call a poison control center or doctor for treatment advice if burning or irritation of skin persists.</li> </ul>
IF SWALLOWED	<ul style="list-style-type: none"> <li>▪ Have person sip a glass of water if able to swallow.</li> <li>▪ Call a poison control center or doctor immediately for treatment advice.</li> <li>▪ Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>▪ Do not give to an unconscious person.</li> </ul>
IF INHALED	<ul style="list-style-type: none"> <li>▪ Move person to fresh air and monitor for respiratory distress.</li> <li>▪ If cough or difficulty in breathing develops, consult a physician immediately.</li> <li>▪ If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>▪ Call a poison control center or doctor for further treatment advice.</li> </ul>
<p><b>For emergency information call: 800-424-9300 (24 hours)</b>            Have the product container or label with you when calling a poison control center or doctor or going to treatment.</p>	
<p><b>NOTE TO PHYSICIAN</b>            Probable mucosal damage may contraindicate for the use of gastric lavage.</p>	

TA COMB, LLC  
1241 N. Ellis  
Bensenville, IL 60106

EPA Reg. No. 88341-A  
EPA Est. No.

Lot# \_\_\_\_\_

Net Contents \_\_\_\_\_

Gallons \_\_\_\_\_

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS & DOMESTIC ANIMALS  
DANGER**

**Corrosive.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. May be harmful if inhaled. Do not get in eyes, on skin or on clothing. Wear protective eyewear (splash proof goggles). Wear protective clothing and rubber gloves when handling this product. Avoid breathing mists or fumes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing to avoid fire.

**ENVIRONMENTAL HAZARDS**

This product is potentially toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL AND CHEMICAL HAZARDS**

Dry sodium chlorite is a strong oxidizing agent. This product is incompatible with strong acids, oxidizing agents, and reducing agents. This product becomes a fire or explosive hazard if allowed to dry. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter. Do not use moist or damp utensils.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

## **DIRECTIONS FOR CONTROLLING THE GROWTH OF ALGAE IN RECIRCULATING COOLING WATER TOWERS**

1. Clean badly fouled systems before starting treatment.
2. When algae are visible, add an initial dosage of 22 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system. Repeat if necessary until control is evident.
3. Where algae control is evident, use a subsequent dose of 11 fluid ounces of PureCide® 7.5 per 1,000 gals. of water in the system twice a week or as needed to maintain control.
4. Add PureCide® 7.5 directly to the cooling tower drip pan (cold water basin) near the inlet to the recirculating pump.

## **Directions for Use in the Chemical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Microorganism or Mollusk Control, and as a Chemical Oxidant in Aquatic Systems**

**User is responsible for compliance with applicable Federal, state and local laws regarding proper use and disposal of the chlorine dioxide generated.**

**Feed requirements:** Feed rates of PureCide® 7.5 will depend on the severity of contamination and the degree of control desired. The exact dosage will depend on the size of the system and residual necessary for effective control. Depending on the generator type, PureCide® 7.5 may be diluted with water at the point of use to prepare a lower % active aqueous solution for use in chlorine dioxide generators.

Some examples of industrial applications of chlorine dioxide include:

- Potable water disinfection and removal of sulfide
- Control of bacterial slime and algae and mollusks in industrial recirculating and one-pass cooling systems
- Biocontrol in food processing flumes, water-using equipment, cooling water, and recycled waters.
- Disinfection of sewage and plant wastes.
- Destruction of phenolics, simple cyanides and sulfides by chemical oxidation.
- Bacterial slime control in white water paper mill systems.
- Bacterial control in oil well and petroleum systems.

**Method of feed:** Large amounts of chlorine dioxide ( $\text{ClO}_2$ ) can be generated by several common methods, including:

1. The chlorine method which utilizes a sodium chlorite solution and chlorine gas, or
2. The hypochlorite method which utilizes a sodium chlorite solution, a hypochlorite solution, and an acid, or
3. The Acid-chlorite method, which utilizes a sodium chlorite solution and an acid, or
4. The electrolytic method, which utilizes a sodium chlorite solution, with sodium chlorite added, as needed.

Your T.A. Comb representative can guide you in the selection, installation and operation

for feed systems.

### **Potable Water Treatment**

The selected generator should be equipped with a sensor that detects the concentration of  $\text{ClO}_2$  that is produced. In addition, the generator should be periodically calibrated according to the manufacturer's instructions and/or by using standard chlorine dioxide, quantitated by iodometric titration. Read the instructions on the chlorine dioxide generation system before using this product.

$\text{ClO}_2$  is used as both an oxidant and a disinfectant in drinking water treatment. For most municipal and public potable water systems, a chlorine dioxide residual concentration of 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

### **Industrial Cooling Water Treatment**

For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required dosages will vary depending on the exact application and the degree of contamination present. The required  $\text{ClO}_2$  residual concentrations range between 0.1 and 5.0 ppm. Chlorine dioxide may be applied either continuously or intermittently. The typical chlorine dioxide residual concentration range is 0.1 - 1.0 ppm for continuous doses, and 0.1 - 5.0 ppm for intermittent doses. The minimum acceptable residual concentration of  $\text{ClO}_2$  is 0.1 ppm for a minimum one minute contact time.

### **Mollusk Control in Water Systems**

$\text{ClO}_2$  generated from sodium chlorite may be used for mollusk control in commercial and industrial recirculating and one-pass cooling water systems. The required dosages will vary with the system type, system conditions, the degree of water contamination present and the desired level of control. Depending on the extent of the infestation, sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve the necessary  $\text{ClO}_2$  residual concentration.

Veliger Control: Maintain a continuous chlorine dioxide residual of 0.1 - 0.5 ppm.

Intermittent Dose: Apply  $\text{ClO}_2$  to obtain a chlorine dioxide residual concentration of 0.2 - 25 ppm. Repeat as necessary to maintain control.

Continuous Dose: Maintain a  $\text{ClO}_2$  residual concentration of up to 2 ppm.

### **Food Plant Process Water Treatment**

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems, cheese brine and hydro coolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system,  $\text{ClO}_2$  should be applied continuously or intermittently to achieve a  $\text{ClO}_2$  residual concentration between 0.25 and 5.0 ppm.

Water containing up to 3 ppm residual  $\text{ClO}_2$  may be used to:

- (1) Provide microbial control in wash or process water for fruit and vegetable raw agricultural commodities.
- (2) Control spoilage and decay causing non-public health microorganisms present in the wash or process water for fruit and vegetable raw agricultural commodities.
- (3) Provide microbial control in poultry chiller water.

Water containing up to 3 ppm residual chlorine dioxide may be used for washing fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with chlorine dioxide must be followed by a potable water rinse, or by blanching, cooking or canning.

$\text{ClO}_2$  gas may be used for fumigating fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with  $\text{ClO}_2$  in a closed chamber system must be followed by a potable water rinse, or by blanching, cooking or canning.

#### **Wastewater Treatment**

$\text{ClO}_2$  is effective as both a disinfectant and an oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a chlorine dioxide residual concentration of up to 5 ppm is sufficient to provide adequate disinfection.

For sulfide odor control, between pH 5-9, a minimum of 5.2 ppm (wt) of  $\text{ClO}_2$  should be applied to oxidize 1 ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8, 1.5 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol; at pH greater than 10, 3.3 ppm  $\text{ClO}_2$  will oxidize 1 ppm phenol.

#### **Bacterial Slime Control in Paper Mills**

$\text{ClO}_2$  generated from sodium chlorite is effective for use in controlling microbiological growth in white water paper mill systems. The required dosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, sodium chlorite should be applied continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.

#### **Directions for Use in Controlling Microbial Population in Poultry Processing Water**

$\text{ClO}_2$  generated from this product may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does

not exceed 3 ppm, as determined by an appropriate method in accordance with 21CFR§173.300.

For treatment of poultry chill water, apply this product as necessary through a ClO<sub>2</sub> generation system to maintain a residual concentration of up to 3 ppm.

#### **Bacterial Control in Oil Wells and Petroleum Systems**

ClO<sub>2</sub> is effective in the remediation of bacterial and sulfide contamination commonly found in oilfield production, injection and disposal fluids. The required dosages will vary with process conditions. ClO<sub>2</sub> may be applied either continuously or intermittently to oil well production water as it is separated from the oil, and before it is re-injected into the well.

For continuous feeds, ClO<sub>2</sub> may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, chlorine dioxide should be applied at a shock dosage of 200-3000 ppm.

**FOR USE ONLY WITH PURELINE® TREATMENT SYSTEMS FOR GENERATING CHLORINE DIOXIDE GAS TO APPLY AS A FUMIGANT to inhibit odor causing bacteria and odor causing microorganisms, and TO CONTROL MOLD AND MILDEW ON HARD, NON-POROUS AND POROUS SURFACES IN/ON BUILDINGS AND THEIR CONTENTS**

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Handlers/applicators must wear:

- Long sleeve shirt and long pants
- Shoes plus socks
- Full face protective respirator using cartridges for chlorine dioxide gas, when concentrations are at or below 5.0 ppm. Use NIOSH/MSHA approval TC-13F-314 Low Pressure Self Contained SCBA Respirator for gas concentrations above 5.0 ppm.
- Waterproof gloves

#### **OVERALL APPROACH TO FUMIGATION AND REMEDIATION**

The objective of ClO<sub>2</sub> fumigation is to effectively treat mold and mildew contamination, and odor causing bacteria and microorganisms present within buildings under operating conditions that protect site workers, the surrounding community and the environment.

Each fumigated building or subpart thereof is properly tented or sealed. During fumigation, operational parameters are monitored at an appropriate number of co-located ClO<sub>2</sub> gas sampling points. At the end of fumigation, the addition of ClO<sub>2</sub> gas is terminated and natural decay of the gas within the building begins. The building is aired out for the final stage. Building decay or ClO<sub>2</sub> removal continues until such time that ClO<sub>2</sub> concentration levels at all monitoring points have fallen below the Occupational Safety and Health Administration (OSHA) eight-hour time-weighted average (TWA)

permissible exposure level (PEL) of 0.1 ppm, at which time the building is re-entered by fumigation personnel.

The user of this product shall develop a site-specific Safety Plan of Action (SPA) that follows these label instructions and takes into account site-specific information such as the size of the structure, its contents, condition, etc.

## **SPECIFIC USE INSTRUCTIONS**

### **Site Preparation**

To the extent feasible, remove debris, non-reusable items and water-soaked materials. Eliminate any sources of water (e.g. roof leaks, damaged plumbing, etc.) that may contribute to further water damage and/or mold and/or bacteria growth. Open any enclosed spaces to allow maximum exposure to the ClO<sub>2</sub> gas during fumigation.

### **Building Containment**

Tent the building undergoing fumigation completely with a material proven to be impervious to ClO<sub>2</sub> gas, or effectively seal the building through utilization of sealing materials such as tape, caulking, etc. in all external cracks, crevices, etc. through which ClO<sub>2</sub> might otherwise escape during fumigation.

### **Negative Air Pressure**

Contain ClO<sub>2</sub> gas in the building through use of a negative air pressure system to maintain a slight negative pressure on the internal walls and ceiling of the building at all times.

Pause the fumigation process immediately should ClO<sub>2</sub> breakthrough be observed at any time outside the contained area until the cause of breakthrough is ascertained and corrective measures are implemented as necessary.

### **Chlorine Dioxide Generation**

Generate ClO<sub>2</sub> in a ClO<sub>2</sub> generation system that produces ClO<sub>2</sub> gas through the use of an electrolytic generation system. The system reacts, PureCide® 7.5 sodium chlorite solution in electrolytic cells producing ClO<sub>2</sub>. Follow the label directions of that product. The ClO<sub>2</sub> gas generated will be pumped from the machine to the building.

### **Chlorine Dioxide Removal**

At the conclusion of fumigation, allow residual ClO<sub>2</sub> gas remaining in the building to decay naturally, or if quicker removal of ClO<sub>2</sub> is desired, allow fresh air to enter building.

### **Chemical Storage**

Store chemicals in drums, (5, 30 or 55 gal) depending on the size of the building being fumigated. Store all precursor and neutralization chemicals within secondary containment areas.

### Process Wastewater

Store wastewater generated by the fumigation process temporarily in a dedicated on-site storage tank. Collect and analyze representative samples of the wastewater for purposes of waste profiling. If the wastewater is determined to be non-hazardous, dispose of into the sanitary sewer system if allowed by the local publicly owned treatment works. Otherwise, send off site to a permitted non-hazardous wastewater treatment facility.

### Ancillary Equipment

Provide standby electrical generation power to provide power to critical fumigation systems should utility power to a fumigation site be interrupted at any time.

### Equipment Testing

Test all key fumigation system components as they are installed to ensure that all subsystems will operate as designed.

Before commencing the fumigation, conduct a low-level "pulse" test in which all subsystems are simultaneously challenged as if it were the actual fumigation, with the exception that significantly lower ClO<sub>2</sub> concentration levels are used (i.e., 200 to 500 ppm) than those used during the actual fumigation process and ClO<sub>2</sub> is introduced into the building for a much shorter duration (i.e., 15-30 minutes). Design and conduct the test such that all elements that support the fumigation are proven functional, operational and effective.

### Fumigation Operation Sequencing

Perform fumigation activities in the following operational sequence to ensure safety and efficacy of the process.

Task Number	Task Description
1	Verify spill containment supplies are in place
2	Verify necessary chemical inventory is in place
3	Verify acceptable meteorological conditions exist
4	Conduct pre-fumigation safety meeting
5	Verify Emergency Response Team is in place
6	Verify Operations Team is in place
7	Confirm all personnel are out of building
8	Initial ClO <sub>2</sub> generation
9	Initiate ClO <sub>2</sub> concentration "ramp-up"
10	Initiate internal and external ClO <sub>2</sub> gas sampling
11	Achieve minimum desired ClO <sub>2</sub> concentration to start CT clock
12	Maintain ClO <sub>2</sub> concentration above target level
13	Terminate ClO <sub>2</sub> generation
14	Terminate gas sampling when ClO <sub>2</sub> <0.1 ppm
15	Conduct building inspection entry

### **Temperature Monitoring**

Monitor temperature at an appropriate number of co-located building locations through use of HOBO® U12-011 TEMP/RH Data Loggers. The instrument has a measuring range of -4 to 158°F with an accuracy of  $\pm 0.63^\circ\text{F}$ . Take measurement of 5-minute intervals during the conditioning, fumigation and aeration phases of the process. Obtain a local readout of temperature readings by connecting the data loggers to a PC via USB cable from the various monitoring locations. Log data in the monitor during fumigation and download for manipulation following fumigation.

### **Chlorine Dioxide Monitoring**

Monitor  $\text{ClO}_2$  concentration levels by means of a composite sample collection system constructed of 1/4-in inside diameter high-density polyethylene (HDPE) tubing. HDPE tubing has been shown to be non-reactive with  $\text{ClO}_2$ . Run the tubing from an appropriate number of co-located monitoring locations inside the building to a central sampling manifold located outside the building. Have knowledgeable air-sampling technicians collect samples and deliver them to an on-site gas laboratory for analysis.

### **USE PRECAUTIONS**

Conduct fumigation operations in a manner that protects both workers and members of the general public from exposure to fumigation process chemicals through implementation of specifically designed safety measures.

### **Worker Safety**

#### **Site-Specific Health and Safety Plan**

Develop a Site-Specific Health and Safety Plan (HASP) to establish safe working and operating conditions for both fumigation preparation activities and fumigation operations. Prepare the HASP in accordance with applicable OSHA guidelines and regulations.

#### **Health and Safety Training**

Establish minimum health and safety training requirements for all personnel involved in fumigation operations. Do not allow workers to participate in, or supervise field activities until they have been trained to a level required by their job function and responsibility. Cover appropriate elements during initial training including: (1) names of personnel and alternates responsible for site safety and health; (2) safety, health and other hazards present on site; (3) proper use, care and maintenance of PPE; (4) work practices by which the worker can minimize risks from hazards; (5) safe use of engineering controls and equipment on site; (6) medical surveillance requirements, including recognition of symptoms and signs which might indicate over exposure to hazards; and (7) contents of the site HASP.

In addition to initial training, provide Hazard Communication (HAZCOM) and Respiratory Protection training. In HAZCOM training, provide information on the possible types of biological or chemical agent contamination present within a facility, as well as the chemical substances stored and generated on-site, including physical

properties, fire and explosion data, reactivity data, health hazard data, emergency and first aid procedures, spill and leak procedures, etc. In Respiratory Protection training, provide information about the proper selection, fitting, use, care and maintenance of respirators, with an emphasis on specific respirators worn if responding to an emergency involving either a chemical release or a fire. Provide basic First Aid and CPR training to all personnel who might be involved in a response to a medical emergency on-site.

Provide an orientation briefing to individuals who are on-site for short periods of time performing limited tasks as either visitors or contractors, including an overview of the site-specific HASP and a discussion of the facility layout. Also make these individuals aware of evacuation notification procedures and alert them to the pre-determined emergency response Rally Points or places of safe refuge where they should report in the event of an emergency.

#### **Post-Fumigation Building Re-Entry Requirements**

Establish a post-fumigation building re-entry requirements that prohibits workers from re-entering the building in OSHA Level D protective equipment until such time that it has been demonstrated that the concentration of ClO<sub>2</sub> at all monitoring points has fallen to a level below the applicable OSHA TWA PEL standard at 0.1 ppm.

### **Public Safety**

#### **Site Emergency Planning**

Conduct meetings on-site periodically to discuss project roles and responsibilities, site communication procedures, hazardous materials storage issues and potential hazards. The goal of these meetings should be to gain consensus with regard to roles and responsibilities during potential emergency events.

#### **Site Security**

Establish site security measures to prevent unauthorized entry to the site and secure the site perimeter during on-going fumigation preparation activities. Include site entry control procedures, personnel responsibilities, facility lighting requirements and emergency communication procedures.

#### **Specialized Training**

Provide specialized training to prepare site personnel to respond to a variety of potential emergency event scenarios that might occur during fumigation preparation activities or during the fumigation itself including a fire inside or outside the building, chemical spill and/or a release of a significant amount of the fumigant to the atmosphere during fumigation.

#### **Emergency Response Supplies and PPE**

Stage appropriate spill response supplies suitable for cleanup of hazardous materials being stored on-site in close proximity to the stored materials. Also stage a variety of

PPE, including Self-Contained Breathing Apparatus, at appropriate locations for use in an emergency response to a potential hazardous material release.

### **Site Communications**

Assign two-way radios to key personnel at the site. Two-way radios facilitate effective communication among all parties at the worksite and allow for careful monitoring of work tasks by individuals responsible for initiating and performing emergency response activities. Use separate channels for work being performed inside and outside the building so that individuals monitoring the work can effectively monitor tasks being performed in both locations simultaneously.

### **Surface and Ground Water Protection**

Protect surface and ground water supplies by containing any chemical release that might occur within a secondary containment area and respond with absorbents and neutralizing agents stored on-site. Place impervious spill mats in close proximity to storm drains in the vicinity of chemical storage areas where necessary. Deploy these mats immediately to cover drainage catch basins in the event of a chemical release from a primary storage vessel.

### **Site Evacuation Contingency Plan**

Develop specific procedures to respond to a potential emergency response scenarios that might occur during fumigation preparation operations or the fumigation itself. Identify a Site Safety and Health Officer (SSHO) who is responsible for determining when on-site personnel should "Shelter-In-Place" or evacuate the site should an emergency evacuation of the site be contemplated.

### **Fire Response**

Place fire extinguishers throughout the site, both inside and outside the building, for use in fighting an incipient-stage fire. Also, activate existing operational building fire suppression systems in the event of a fire inside the building.

In the event that a fire is detected either inside or outside the building, implement a series of predetermined response measures including the following:

- The individual who identifies the fire immediately alerts their Supervisor, the SSHO and the Emergency Response Coordinator (ERC) for the site.
- If the individual who identified the existence of the fire can immediately extinguish it with a local fire extinguisher without endangering themselves or others, they extinguish the fire while the ERC is assembling the on-site Emergency Response Team (ERT).
- The on-site ERT dons proper PPE and initiates emergency response activities. The ERT is provided with PPE as warranted by the nature of the fire.

- Potentially affected electrical systems are deactivated as soon as possible, if appropriate, to prevent a spread of the fire.
- After donning appropriate PPE, the source and nature of the fire are investigated. If the fire is determined to be in its incipient stage, the ERT attempts to distinguish the fire. If a fire either inside or outside the building is determined to be beyond the incipient stage, the SSHO or ERC immediately requests the assistance of external emergency fire response authorities.
- The SSHO notifies all site workers to cease their activities, shutdown all process equipment and report to a designated location so that a "headcount" may be taken to account for all personnel.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- If the fire emergency also involves a release of hazardous materials, the release is addressed in accordance with the response measures outlined in the Plan.
- If necessary, based on the size and scope of the fire, the SSHO notifies appropriate external authorities and provides them with appropriate information about the fire.

### **Chemical Spill Response**

Locate all storage vessels within secondary containment areas. Store incompatible materials within separate secondary containments. Place impervious spill mats near all storm water catch basins in the vicinity of chemical storage areas where necessary to prevent inadvertent discharge of chemicals through the storm drain sewer system in the event of a leak or other accidental release.

In the event that a hazardous material leak from a storage vessel or associated piping is detected, implement a series of predetermined response measures including the following:

- The individual who identified the release immediately alerts their Supervisor, the SSHO and the ERC for the site.
- The ERC assembles the on-site ERT, who don proper PPE and initial response activities. The ERT is provided with PPE as warranted by the nature of the hazardous material release.
- After donning appropriate PPE, the source and nature of the release are investigated and the release is stopped at its source (if safe to do so). Spill mats are placed over storm drain catch basins to prevent discharge of spilled material

to the storm water drainage system and/or to ground water where necessary. Any sources of ignition present in the area are also eliminated.

- If any personnel have been affected by the release, they are evacuated from the area of impact as soon as possible and first aid administered as appropriate. If necessary, external medical emergency response authorities are summoned.
- Only members of the ERT involved in overseeing or performing emergency operations are allowed within the designated hazard area. If possible, the area is roped or otherwise blocked off. If a release cannot be immediately contained within a containment area, an isolation area is established around the spill, using sorbent and neutralizing materials.
- In the event a release breaches onsite secondary containment, the leading edge around the spill is contained with neutralizing agents and/or absorbents or other appropriate materials. Pumps may be employed to transfer spilled liquids to on-site waste tanks and for the removal of any liquid that may congregate at low points or depressions on surfaces.
- If the total amount of hazardous material released is less than the equivalent volume of 300 gallons, spill response materials and equipment located on-site are utilized to contain and collect the waste.
- Collected waste material is stored in secure storage containers for future disposal.
- If the amount of hazardous material released is greater than that which can be contained and collected for disposal by the on-site ERT, arrangements are made with an external contractor to respond to the site with adequate supplies and equipment to perform necessary clean-up operations.
- The SSHO determines if a site evacuation is necessary. If instructed to evacuate, personnel proceed to one of the designated Rally Points or to an off-site place of safe refuge.
- The SSHO notifies external emergency response authorities if deemed necessary by the size and scope of the release. External emergency response authorities will take appropriate actions if required to safeguard the surrounding community.
- Following the initial spill response, provisions are made to conduct a full environmental assessment to delineate impacted areas. Hazardous materials generated from a release are disposed of off-site in accordance with applicable laws and regulations.

### **Building ClO<sub>2</sub> Leak Detection and Repair**

Perform ambient air monitoring during both the low-level "pulse" test and the actual fumigation to identify leaks of ClO<sub>2</sub> gas from the building so that appropriate action may be taken in the event a leak is detected. Whenever possible, repair building leaks immediately using appropriate patching materials.

Dispatch teams of trained employees to the immediate perimeters of the building, and to the rooftop where appropriate, as soon as ClO<sub>2</sub> liquid begins flowing from the generator to the emitters. Initially assign at least two teams to building monitoring duties. Each team should consist of at least two individuals, each having had sufficient previous experience with ClO<sub>2</sub> to readily identify its characteristic odor in air.

Equip each monitoring team with a calibrated Industrial Scientific Gas Monitor with a ClO<sub>2</sub> sensor capable of detecting ClO<sub>2</sub> gas and reporting TWA readings for purpose of comparison with OSHA's eight-hour TWA PEL and the American Conference of Governmental Industrial Hygienists (ACGIH) recommended 15-minute TWA Short Term Exposure Limit (STEL) of 0.3 ppm and the OSHA PEL is 0.1 ppm. Because the human olfactory response to ClO<sub>2</sub> has been shown through experience to be far more sensitive than any commercially-available hand-held monitoring technology, the primary objective of using the monitor is not to identify the presence of ClO<sub>2</sub> emissions, but rather to make sure that team members are not being exposed to concentrations of the gas that are in excess of prescribed standards and recommended threshold levels while they are performing their ambient monitoring and repair assignments. In the event that ClO<sub>2</sub> readings above the 0.1 ppm eight-hour OSHA standard or the 0.3 ppm 15-minute ACGIH STEL are registered by a monitor during fumigation, the team identifying the reading should leave the area where the elevated reading was identified and don appropriate respiratory protection before continuing work in the area. A full-face negative pressure respirator with combination P-100 filter/acid gas cartridges should be used for ClO<sub>2</sub> concentrations above an applicable exposure standard but less than 5 ppm. A self-contained breathing apparatus and appropriate skin protection must be used in any atmosphere containing more than 5 ppm ClO<sub>2</sub>.

Identify potential sources of ClO<sub>2</sub> emissions from the top and sides of the building and immediately perform any repairs and/or modifications necessary to eliminate or reduce emissions to the greatest degree possible. Also, communicate monitoring findings to the Project Manager so that operational changes and/or shutdown of fumigation operations can be initiated immediately in the event that a leak cannot be effectively patched in a reasonable period of time. When a building leak cannot be quickly and effectively repaired, adjust operational parameters as necessary to mitigate the leak or terminate the fumigation process to eliminate exposure risk to the surrounding community.

### **Adjustment of Operational Parameters**

In the event a ClO<sub>2</sub> leak cannot be promptly repaired through use of available patching materials, adjust fumigation operating parameters, either temporarily or for the remaining duration of the fumigation, to prevent additional gas from escaping the building into the surrounding environment.

Increase the NAU fan speed upwards to increase the negative pressure level on the internal walls and ceiling of the building and/or decrease the target ClO<sub>2</sub> concentration level being applied to the building to lower the concentration of ClO<sub>2</sub> in air escaping through the leak.

#### **Termination of Fumigation Process**

Should it be determined that a significant ClO<sub>2</sub> leak cannot be effectively repaired, nor can the magnitude of the leak be substantially mitigated through adjustment of operational parameters, terminate the fumigation process and take necessary measures to remove residual gas from the building.

#### **Post Fumigation Repair and Cleaning**

Remove any remaining debris, non-reusable items and water soaked materials. Replace, repair or clean damaged areas of structure as needed. For additional information and guidance on mold remediation, see EPA's website at [www.epa.gov/mold](http://www.epa.gov/mold).

### **STORAGE AND DISPOSAL**

**PESTICIDE STORAGE:** Do not contaminate water, food or feed by storage or disposal. Keep product in tightly closed container when not in use. Don't drop, roll or skid drum. Keep upright. Always replace cover. Store in a cool, dry, well-ventilated area away from heat or open flame.

**EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and well-ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large quantities of water. Any unopened drums near the fire should be cooled by spraying with water.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### **CONTAINER HANDLING:**

**For non-refillable solid containers smaller than 50 lbs.**

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container

over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning.

**For non-refillable solid containers that are larger than 50lbs.**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning if appropriate. Triple Rinse container promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or mix tank or store rinsate for later use or disposal. Repeat the procedure two more times.

For refillable containers, all sizes.

Refillable container. Refill this container with PureCide® 7.5 only. Do not reuse this container for any other purpose. Cleaning or pressure rinsing the container is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

**WARRANTY**

**TA Comb, LLC** warrants that this product complies with the specifications expressed on the label. To the extent consistent with applicable law, **TA Comb, LLC** makes no other warranties, and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose.

